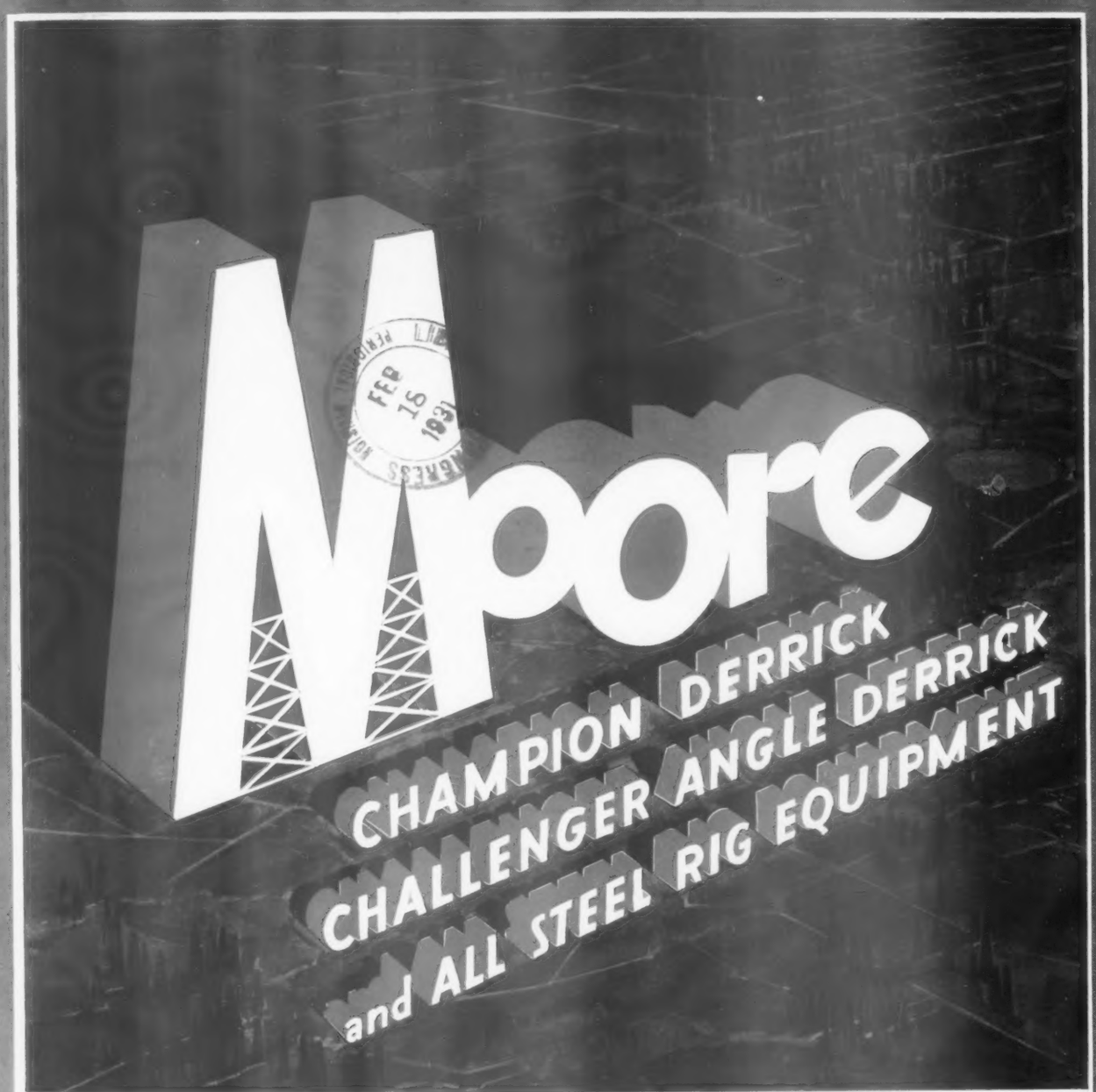
15 CENTS A COPY

THE OIL WEEKLY

Devoted Exclusively To The Production and Transportation of Oil and Gas

Engineering News Statistics



FEB 16 1931

January 16, 1931

ADVERTISERS INDEX, LAST PAGE

EDITORIAL INDEX, PAGE 21

OTHER BREWSTER PRODUCTS

Include A. P. I. Shouldered Tool Joints; Perfection Core Barrels; Chrome Nickel Drill Collars; Special Fish Tail and Gumbo Bits; Core Barrel Cutter Heads for both hard and soft formations—hard formation cutter heads are faced with a substance of diamond-like hardness.

Straight hole drilling . . . . . is like Bull's Eye Shooting . . .

easy..with the right kind of tools!

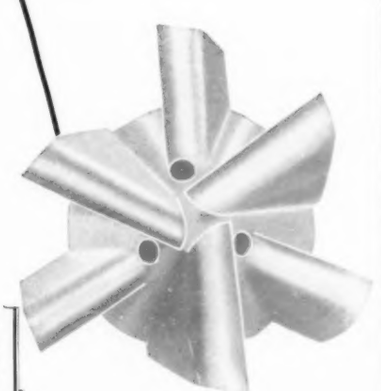
Ask any one of the hundreds of operators who recommend the Brewster Straight Hole, hard or soft formation bit, why they use it. They will tell you they look upon it as a definite guarantee of a straight hole.

The Name "BREWSTER"

—is a definite guarantee of performance plus.

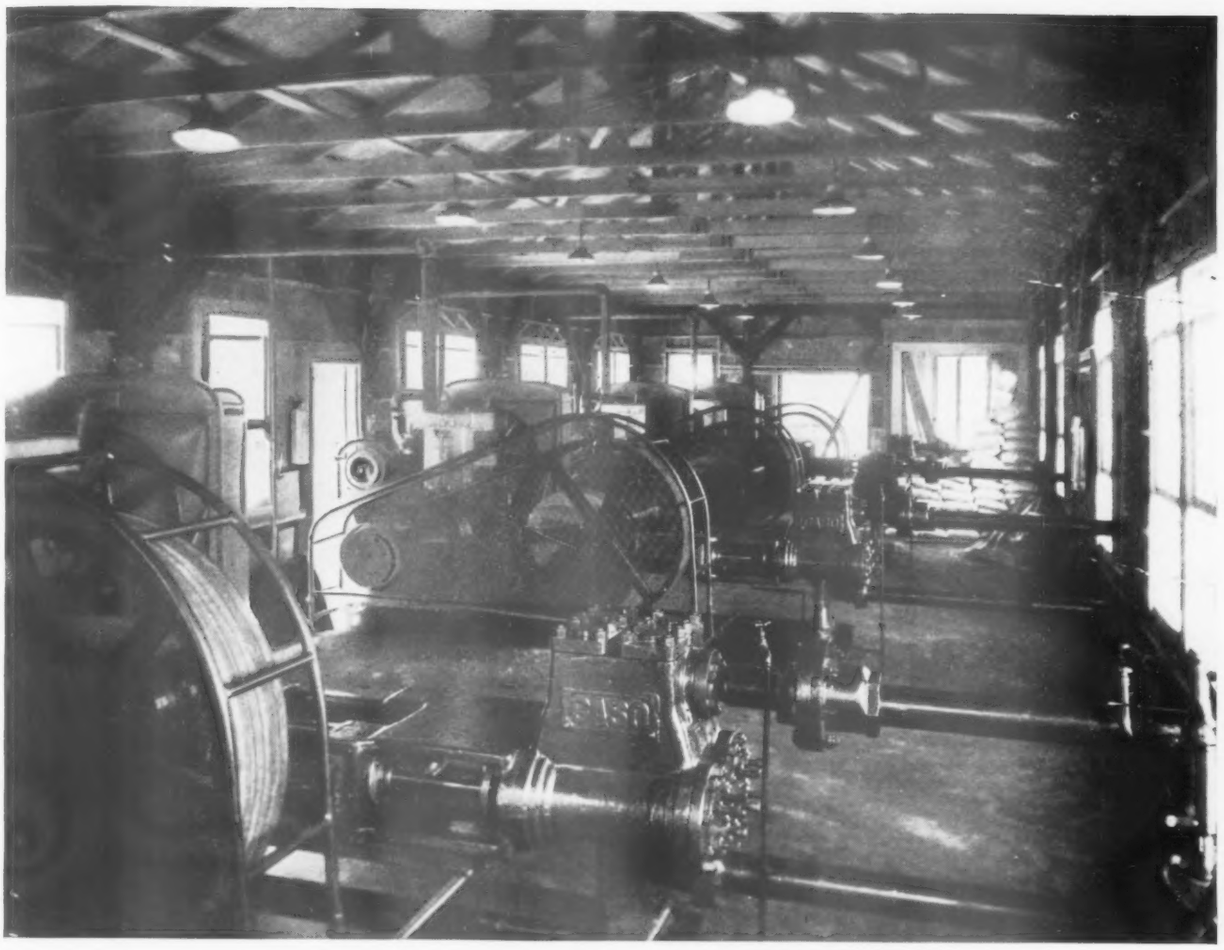
Pat. Pend. No. 438,542

The Brewster COMPANY~INC.
Shreveport,Louisiana



COMPLETE STOCK carried at these warehouses: Iverson Specialty Co., Oklahoma City, phone 2-2833; Houston Store, 2000 Harrington St., phone Capitol 3021. *Distributors:* Wilson Supply Co., Houston, Beaumont and Luling, Texas; Continental Supply Co., all stores; Murray-Brooks Hardware Co., Lake Charles, Louisiana; T. T. Word Supply Co., Houston, Texas, and Lake Charles, Louisiana; El Dorado Foundry, Machine & Supply Co., El Dorado, Arkansas. *Exclusive Export Agents:* W-K-M Co., New York City.

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year, 15 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879



.CAPACITY.
.PORTABILITY.

The four Diesel-powered Gaso Fig. 710 Pumps in the above station have a capacity of 24,000 bbls. per day at 650 lbs. pressure . . . Compactly mounted on steel skids, these units are easily moved . .

GASO PUMP & BURNER MFG. CO. - - - Tulsa, Okla.
Export Office: New York, N. Y.

GASO PUMPS
FOR EVERY OIL INDUSTRY NEED

FIELD WEL

A bell hole welder tying in a 400-foot **SMITH***Welded 24" Pipe with* **SMITH***Welding*

SMITH*WELDED*

DING

Across California, ten welders welded 40-foot lengths of 24″ pipe into 400-foot lengths and these 400-foot lengths into 4000-foot lengths, at a sustained average of 4700 feet per day.

A. O. SMITH CORPORATION

General Offices: Milwaukee, Wisconsin

OIL AND GAS FIELD PRODUCTS DIVISION

District Offices:

New York · Tulsa · Houston · Los Angeles

GAS LINE PIPE

WRIGHT

HIGH SPEED HOISTS

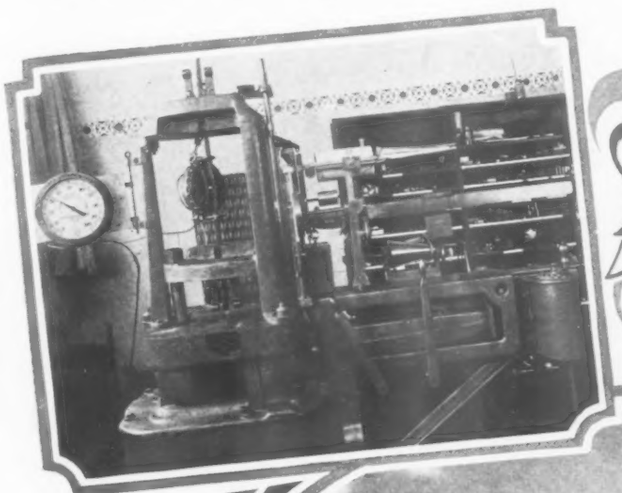
LIFE depends on your choice of a hoist. The inspection plate on your Wright Hoist means it is thoroughly tested under 50% over-load, on a long ton basis. ¶ The name "Wright" on your hoist signifies utmost quality of material and workmanship. Speed and ease of operation . . . and, above all, assurance against failure. ¶ There is a Wright Distributor nearby.

THOROUGHBRED OF HOISTS
CHARACTER · SPEED · STAMINA

WRIGHT MANUFACTURING COMPANY
BRIDGEPORT, CONNECTICUT
An Associate Company of the American Chain Company, Inc.

ACCO
DISTRIBUTORS SERVE INDUSTRY ECONOMICALLY

MARTIN-DECKER
Quality Is Not Accidental



Liberal use of the Olsen Testing Machine insures accuracy

Every gauge is checked against master gauges before leaving the plant

Castings are all tested under hydraulic pressure before and after machining

Extreme care is taken in packing and shipping

Weight Indicator
Vernier Gauge
Steel Paneled Box
Pump Dynamometer

MARTIN-DECKER CORP.

3431 Cherry Ave., Long Beach, California

Mid-Continent Distributors
Reed Roller Bit Company
Houston, Texas

Foreign Distributors for Weight Indicator
Oil Well Supply Company
Pittsburgh, Pa.

Mud Pump Gauge
Mud Scales
Pull Rod Dynamometer
Temperature Bomb

Inbuilt RUGGEDNESS makes Gilmer V-Belts indispensable to the modern V-Belt Drive

CROSS SECTION E

IT'S what is *inside* the jacket that gives the Gilmer its *superiority*

IT'S what is inside—*and what happens inside* when the belt is bent around a sheave that means all the difference between ordinary V-Belt performance and the superlative efficiency that is Gilmer's.

It is not by accident — not by chance—that Gilmer V-Belts possess this unusual efficiency. Every feature is there for a specific engineering purpose . . . At the lower part of the belt, where tremendous compression tends to disintegrate the ordinary belt, Gilmer places a special pliable compression rubber that successfully resists this force . . . At the upper part, where the belt is subjected to repeated bendings, a tough, wear-resisting rubber is found that definitely prevents deterioration.

AND between the upper and lower layers of special rubber is the *neutral axis,* where neither tension nor compression are found. At this point, in every Gilmer V-Belt, superimposed layers of unusually strong cords are placed—*a feature originated by Gilmer engineers.* These cords transmit the load without stretching and setting up internal friction.

Add to these features the tough, wear-resisting jacket, the perfect vulcanizing of the belt into one solid, elastic mass plus the fact that every Gilmer V-Belt is invariably accurate in dimensions and angles, and you will realize why Gilmer V-Belts never slip, never twist or buckle in the grooves. That is why industry after industry is turning to Gilmer V-Belts to help them solve their endless belt problems. Try a set SOON. L. H. Gilmer Co., Tacony, Phila., Pa.

Gilmer

Makers of the World's Best-Known V-Belts

FARRAR & TREFTS
CONTINENTAL "CODE" BOILERS

EASY STEAMING

WITH ELESCO SUPERHEATER

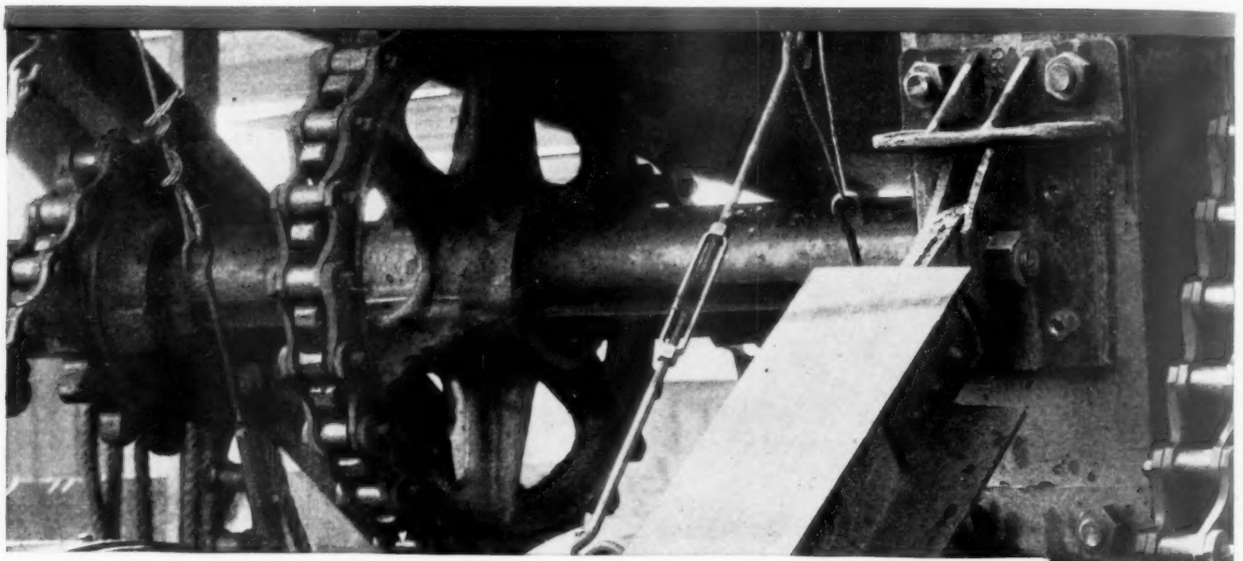
This 125 H. P. 300 lb. W.P. Continental Code Superheater Boiler combines the advantages of Superheat with good boiler design and produces most effective steam generating units for rotary drilling. It has been produced in response to a growing demand by contractors who recognize superheated steam as contributing materially to the speed of rotary drilling operations.

"If Continental Sells It....There Is No Better"

J908

THE CONTINENTAL SUPPLY COMPANY
General Offices: ST. LOUIS
THE CONTINENTAL SUPPLY CO., LTD.
224 Traders Building, Calgary, Alberta, Canada
Export Offices: CONTINENTAL EMSCO COMPANY, INC. 74 Trinity Pl. New York
London Offices: 316-17 Dashwood House, Old Broad St., E. C. 2
CONTINENTAL EMSCO S. A. R., 7, Strada Eminescu, Ploesti, Romania

CONTINENTAL



Since You First Saw DEEPWELL

Every time you needed better chain, it was there and it's there again in 1931.

Build your biggest and best rotaries—

Rex Deepwell will drive them.

Hunt the country over for stronger steels—

Rex Deepwell will stand up to them.

Increase bore and stroke, step up the power—

Rex Deepwell Chabelco will harness it.

Drive deeper and deeper wells—

Rex Deepwell will stay with you to the last oil sand.

For Rex Deepwell Chabelco, the greatest chain that ever hit the oil fields, has done it—

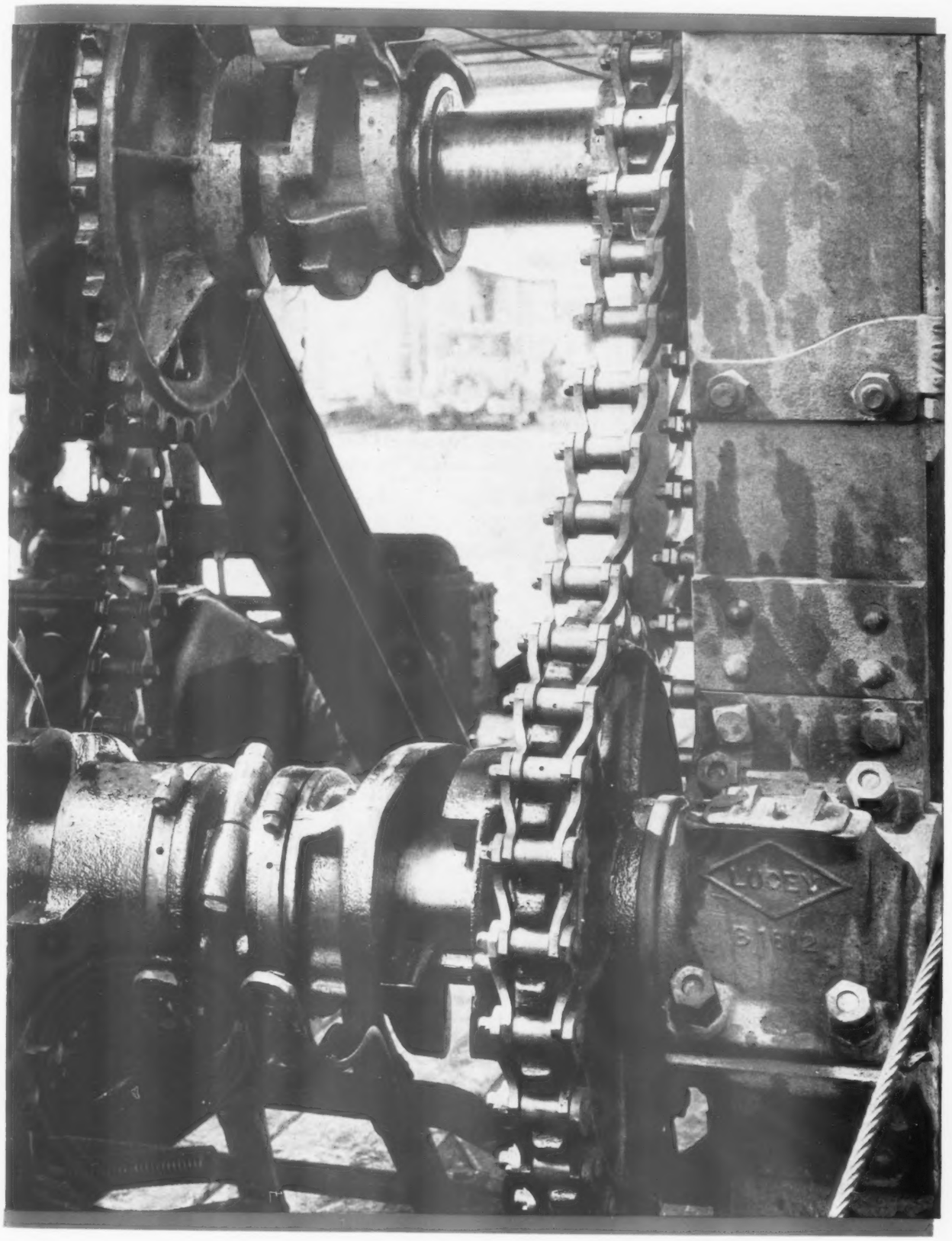
The greatest chain that ever hit the oil fields in United States or abroad.

CHAIN BELT COMPANY, 1639 West Bruce St., Milwaukee, Wis.

1310 Second Nat'l Bank Bldg., Houston, Tex. Cable Address: BELTCHAIN 1414 Santa Fe Ave., Los Angeles, Calif.

Stocks in all Active Oil Fields

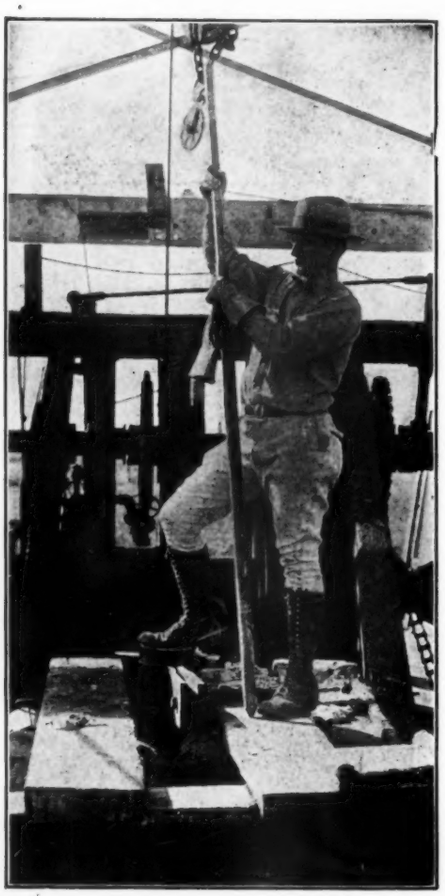
REX Reg. U.S. Pat. Off. DEEPWELL



CHABELCO

The SYFO CLINOGRAPH

The perfect device for the daily recording of vertical deviation in drilling Permanent Records . . . Quickly made . . . No dangerous acids . . . Inexpensive . . . Direct . . . Accurate . . . . . .



Running in a SYFO Clinograph takes very little time and the result can be read immediately

The SYFO Clinograph is not sold, but leased at nominal rates. Being made in different sizes for different depths, it is necessary for the drilling company to advise the conditions under which the surveying will be done before quotation can be made.

The presence of crookedness in a hole is not indicated by any clear cut evidence recognizable from drilling operations—until trouble starts. Even then the major portion of the grief falls on the owner after the well has been brought in and not on the drilling contractor.

As a result well owners are today insisting that the hole be surveyed as it is drilled, making only a fixed latitude from the vertical permissible—no more. For verifying the result and course of the hole, the SYFO Clinograph affords the best check.

The SYFO Clinograph represents a radical improvement in the design and method of operation of inclination measuring instruments. Its advantages may be summarized as follows:

It affords a direct and accurate record. The record is easily obtained *without the use of dangerous acids.* The test is quickly made. The record is on paper and can be filed for reference. Ruggedly built and will operate without decrease in efficiency. Operates on wire line running through drill stem or on sand or bailing line in open hole.

WRITE FOR COMPLETE DESCRIPTIVE LITERATURE AND RATES

SPERRY-SUN WELL SURVEYING CO.

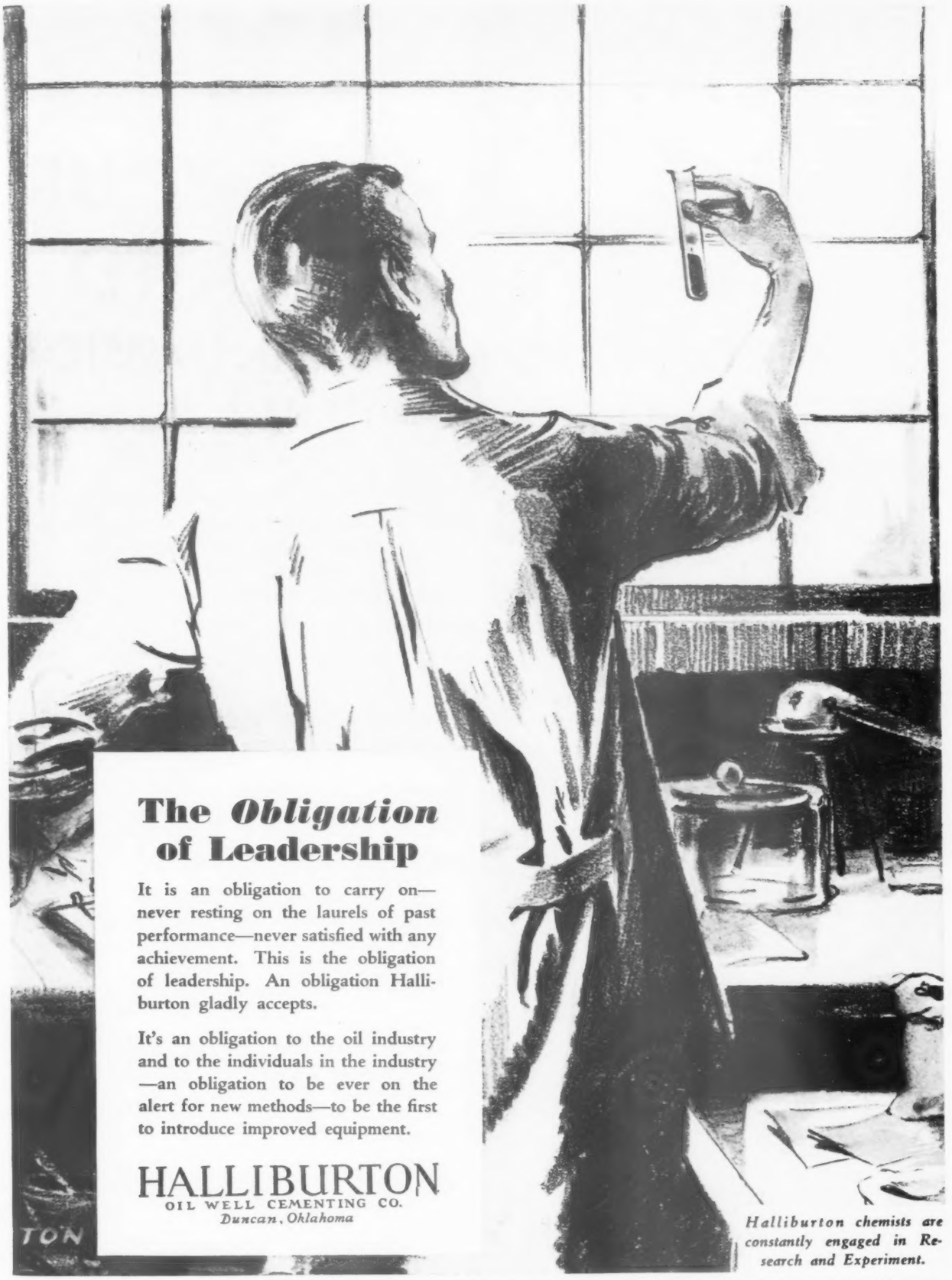
DALLAS, TEXAS:
1504 First National Bank Bldg.

TULSA, OKLAHOMA:
402 Petroleum Building

Main Office - 1608 Walnut Street
PHILADELPHIA, PA.

LOS ANGELES, CALIF.:
415 Petroleum Securities Bldg.

HOUSTON, TEXAS
1420 Esperson Building



The *Obligation* of Leadership

It is an obligation to carry on—never resting on the laurels of past performance—never satisfied with any achievement. This is the obligation of leadership. An obligation Halliburton gladly accepts.

It's an obligation to the oil industry and to the individuals in the industry—an obligation to be ever on the alert for new methods—to be the first to introduce improved equipment.

HALLIBURTON
OIL WELL CEMENTING CO.
Duncan, Oklahoma

Halliburton chemists are constantly engaged in Research and Experiment.

Would you, as a reader of THE OIL WEEKLY, like to receive copies of THE CEMENTER as issued? Each number contains interesting information about cementing and drilling fluids. There is no cost or obligation—simply sign your name below and mail to Halliburton Oil Well Cementing Co., Duncan, Oklahoma.

Name..... Address.....

Dayton COG-BELT DRIVES

MEET YOUR DEMAND

FOR EFFICIENT POWER TRANSMISSION

...and these drives last longer

...require less space

...they have exclusive advantages found only in Dayton Cog-Belts

Dayton Cog-Belts are die-cut—not moulded—they're accurate and stay accurate. They have a firm, non-slipping grip in pulley grooves. This means that you can accurately gauge speeds to product... obtain required speed ratios and positive control.

There's less wear on bearings. Less tension is necessary.

Less space is required. With Dayton's firmer grip and extreme flexibility, shorter belts and smaller pulleys can be used successfully.

Daytons reduce vibration... machines last longer.

LONGER LIFE... Daytons are rugged. They last longer ... run true... do not twist or turn over in pulley grooves... they resist the action of wear, heat and moisture. There's less expense for replacements.

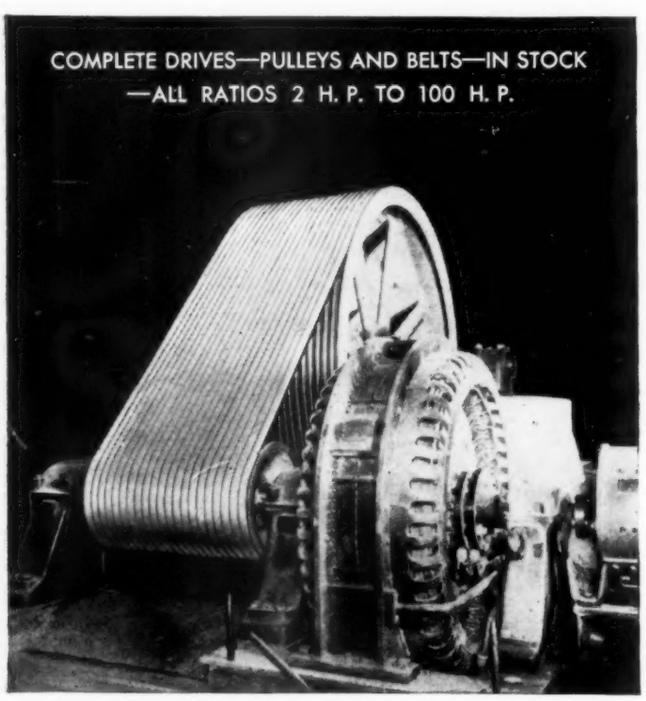
LESS MAINTENANCE... No lubrication is required ... no dressing... no oil or grease to collect dust.

Figure out what all these features will mean to you in savings and increased earnings.

GET ALL THE FACTS... Let us send you complete details. Write for a Dayton Cog-Belt catalog and a section of the belt... today.

THE DAYTON RUBBER MFG. COMPANY
DAYTON, OHIO

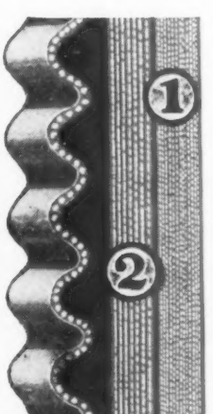
FACTORY DISTRIBUTORS IN PRINCIPAL CITIES AND ALL WESTINGHOUSE ELECTRIC & MFG. COMPANY SALES OFFICES



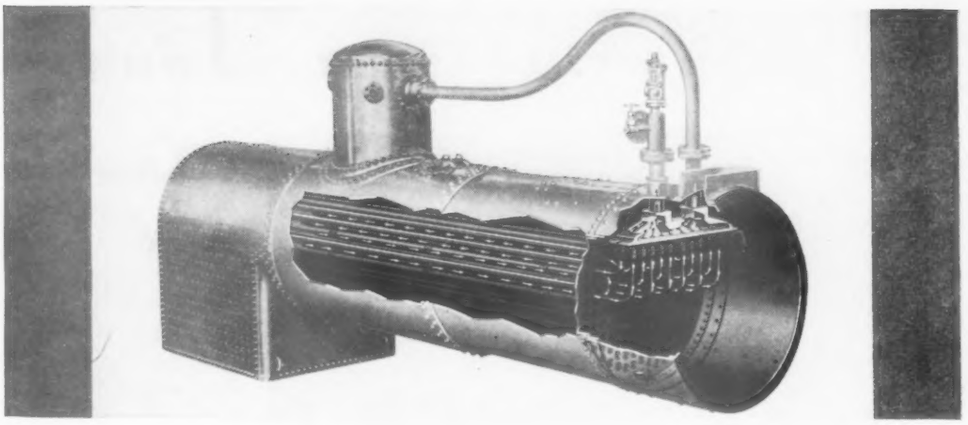
1 The Outer Section gives balance. Composed of layers of vulcanized, strong cord fabric. Bias-cut to accommodate bending without strain or distortion. This is another reason why Daytons don't heat and last longer than other V-type belts.

2 The "Neutral axis", or strength section extends across the entire width of the belt. It's pre-stretched permanently by a patented Dayton process. That's why Daytons have a firmer grip, smoother action, eliminate weaving, and require less servicing in take-up adjustments.

3 The Cog Construction permits Daytons to flex naturally and easily around even the smallest pulleys without distortion, buckling or rippling. This is an exclusive Dayton feature... Daytons are "built to bend."



O-129



Quick, Responsive Power Means Straighter Drilling

Elesco superheaters in oil-country boilers eliminate line condensation losses and supply superheated steam at more nearly full boiler pressure to the cylinders of engine and pump.

This means at least 25 per cent increase in boiler capacity, increased flexibility and increased power at the drilling rig.

The result is a straighter hole in fast time.

These economies bring in new wells with greater certainty and greater profit.

Ask your supply company about the results other drillers are getting from Elesco superheater boilers.

THE SUPERHEATER COMPANY

60 East 42nd Street, NEW YORK

Peoples Gas Building
CHICAGO

ELESCO

Union Trust Building
PITTSBURGH

The following leading boiler manufacturers are prepared to supply oil-country boilers equipped with Elesco superheaters:

The Broderick Company, Muncie, Ind.
Donovan Boiler Works, Inc., Parkersburg, W. Va.
Farrar and Trefts, Inc., Buffalo, N. Y.
Kewanee Boiler Corporation, Kewanee, Ill.
Lucey Manufacturing Corp., Chattanooga, Tenn.
Oil Well Supply Co., Oil City, Pa.
The Titusville Iron Works Co., Titusville, Pa.

MAIL this coupon today for a copy of Bulletin T-20.

THE SUPERHEATER COMPANY,
60 East 42nd Street, New York, N. Y.

Gentlemen:

Please send me a copy of Bulletin T-20, "The Elesco Superheater for Oil-Country Boilers."

Name .....

Position .....

Firm Name .....

Address .....

OW 1-2-31

WILLIAM H. JOHNS

President

Batten, Barton, Durstine & Osborn, Inc.

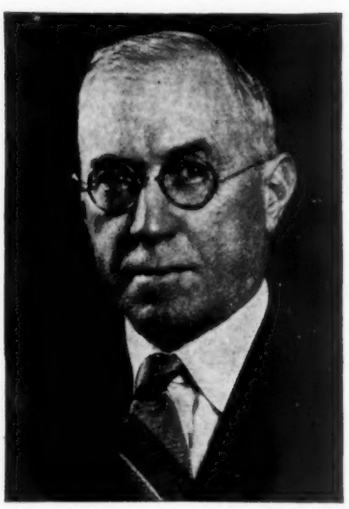
"In our work we make constant use of the A. B. C. and consider it one of the important factors in determining the value of a publication. The A. B. C. is as important to the buyer of space as is the scale to the buyer of merchandise. We see in it constant improvement from year to year, and naturally, it is more and more useful to us."

F. M. LAWRENCE

Secretary

Batten, Barton, Durstine & Osborn, Inc.

"The use and value of information obtained from the A. B. C. statistics are so obvious to anyone buying space, I do not see how a space buyer could do full justice to his position without A. B. C. information. We make use of the A. B. C. daily in our estimating work. It is our authority on circulation and in no way else can we obtain as definite and authentic information on this important part of an advertising campaign."



Business holds such men as these responsible for the success of advertising plans . . .

Executives of advertising agencies . . . they must know, be certain always, of the value of the space that advertising dollars buy.

About circulations and circulation methods they require the uncolored facts. And for this exact information they go to a single source—the Audit Bureau of Circulations.

In the judgment of agency men, the A. B. C. constitutes an indispensable safeguard to the success of advertising campaigns.

The Audit Bureau of Circulations has but one purpose—to provide a yardstick for measuring the value of advertising space.

How, in practice, does the A. B. C. function?

Twice a year almost every important publication in America submits to the Bureau a sworn statement of circulation. This statement answers every question that, in the group judgment of advertisers, has a bearing on circulation value.

Trained auditors from the Bureau, once in each twelve-month period, audit the circulation records at the publication offices—verify or correct every item in the publishers' statements.

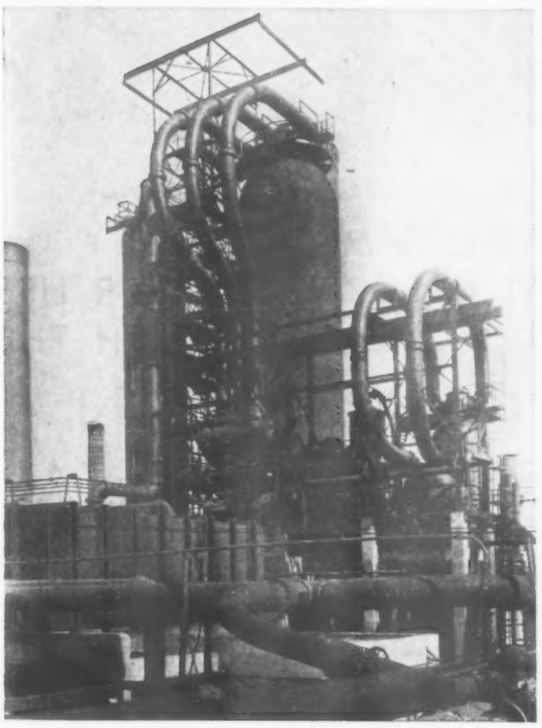
The resulting Audit Reports provide the measuring units for the value of circulations.

As a recognition of an indispensable service, not only agencies and publishers, but a distinguished group of advertisers, hold membership today in the Audit Bureau of Circulations.

An Advertisement by the
AUDIT BUREAU OF CIRCULATIONS
Executive Offices . . . Chicago

GULF

Modern Methods Make Modern Gulf Products



the largest Atmospheric-Vacuum Still ever built.

Paraffine and Coastal Crudes

Gasoline · Lubricating Oils

Naphtha · Gas · Oils

Wax · Petroleum Coke

Cylinder · Engine · Cordage

GULF REFINING COMPANY

General Sales Offices: PITTSBURGH, PA.

FLEXIBLE THINGS ENDURE

THEY'RE TALKING ABOUT IT IN LEAD PENCILS NOW

THE SAME FLEXIBILITY THAT INSURES LONGER LIFE AND MORE FLUID WITH THE

GUIBERSON FLEXIBLE CUP SWAB

Flexible leads — that give under the pressure of writing and stand droppage and misuse without breaking — that's the big thing in lead pencils.

Flexible cups — that give way to protrusions in the casing, thereby escaping wear and damage, yet at the same time keep a perpect seal (even with the protrusion) thereby lifting all the fluid — that's the big feature of the Guiberson Swab — and the biggest thing in swabbing today. The heavier the column of fluid, the more firmly the cup rims are sealed against the casing walls. Guide wires steer the cup rims safely over the damaged areas. Pressure from below collapses the cups, allowing far speedier passage into the hole. The Guiberson Swab is doing most of the world's swabbing today.

"Better Be Safe Than Sorry"
THE GUIBERSON CORP.
Box 1106, Dallas, Texas
California Branch: 1506 Santa Fe Ave., Los Angeles
621 Kennedy Bldg. Tulsa — 321 S. Osage Ave. Ponca City — 506 Trust Bldg. Newark, O.

GUIBERSON
BETTER BE SAFE THAN SORRY

JAN 19 1931 ©CIB 103693

A Gulf Publishing Company Publication

The OIL WEEKLY

Member Audit Bureau of Circulations

VOLUME 60, No. 5

JANUARY 16, 1931

Edited Weekly at Houston, Texas

SPENCER W. ROBINSON, EDITOR

CONTENTS

Special Features

Washington Concerned Over Prairie Withdrawal 21

Direct Current Used for Gulf Coast Drilling Rig 22
By George W. Curry

World Oil Survey Completed 27

Gravity and Output Respond to Repressuring Plan 28
By J. C. Albright

Everything Is Unusual at Kettleman Hills 37
By Brad Mills

Regular Departments

Advertisers' Index 106

Markets-Production-Crude Prices 51

United States Production Estimates 54

Crude Oil Price Quotations 57

Personal Mention 63

Completions for Past Week in All U. S. Fields 84

Permits for New Wells 87

Wildcat Drilling Reports from All Important Areas 88

News from California Fields 79

Oklahoma-Kansas Field Notes 66

Gulf Coast and South Texas Fields 75

North and West Texas Field Notes 68

New Mexico and Rocky Mountain Area 74

Louisiana-Arkansas Development Notes 82

New Equipment, Catalogs, Bulletins, Books 101

Manufacturer and Supply Dealer Notes 103

Squeaks from the Bull Wheel 104

Copyright, 1931

Published Weekly

by

GULF PUBLISHING COMPANY

OFFICE OF PUBLICATION

3301 Buffalo Drive, Houston, Texas

R. L. DUDLEY, *President*

A. L. BURNS, *Gen'l Manager*

SPENCER W. ROBINSON, *Editorial Director*

J. KENT RIDLEY, *Managing Editor*

NEW YORK: Room 613, 250 Park Avenue, Dick Swinsky, Manager.

PITTSBURGH: 703 Park Bldg., W. W. Pigue, Manager.

CHICAGO: 624 So. Michigan Ave., O. R. Waller, Manager.

LOS ANGELES: 416-417 Haas Bldg., W. E. Green, Manager.

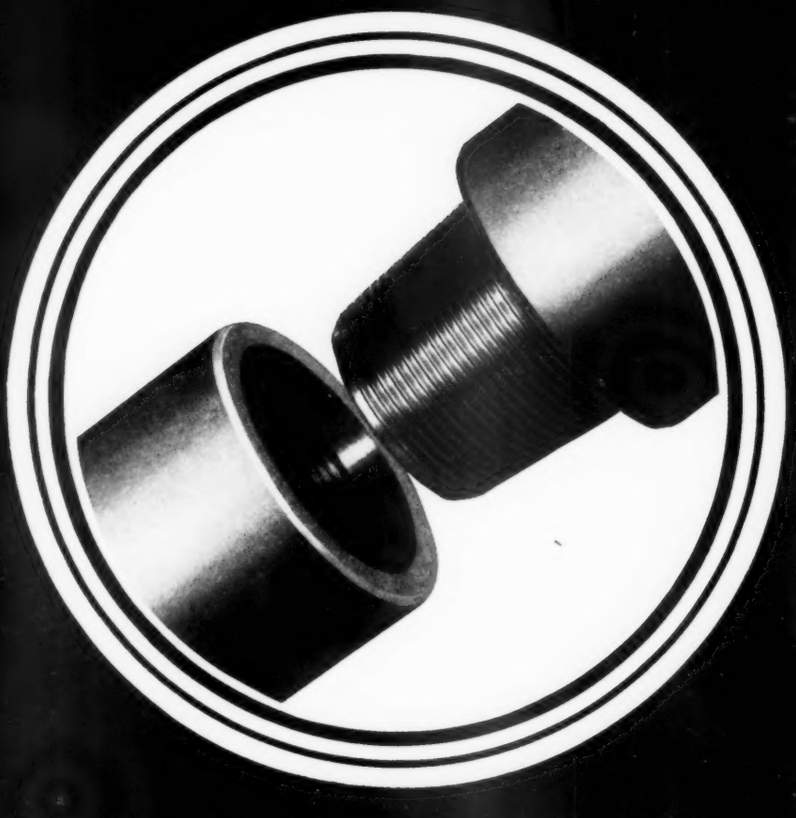
TULSA: 913-916 Hunt Bldg., J. F. Carter, Jr., Manager.

FORT WORTH: 203 W. T. Waggoner Bldg., H. H. King, Manager.

Issued Friday of each week. Single copies 15 cents. Subscription price: Domestic $1.00 a year, Foreign $1.00 a year. Subscription restricted to those engaged in the producing and pipe line branches of the oil business or the manufacture and distribution of oil field supplies. Advertising rates on application.

IDEAL

Tool Joints



Manufactured in all sizes for which A.P.I. Specifications have been adopted

We also manufacture 6 5/8 Joints with 8 1/8 O.D. which we recommend for extremely severe service

THE
NATIONAL SUPPLY
COMPANIES

THE OIL WEEKLY

VOLUME 60, NO. 5 JANUARY 16, 1931

Washington Concerned Over Prairie Withdrawal

Administration bringing pressure on companies to induce making market for "distress oil" as committee comes to Washington

WASHINGTON, D. C.—Some of the difficulties growing out of distressed economic conditions may be forestalled as the result of the action of some of the large oil companies in reaching an agreement for the purchase of Oklahoma and Kansas crudes, released by Prairie Oil & Gas Company's suspension of purchase January 1. The agreement was reached last week, but further conferences are being held to determine the distribution among the purchasing companies of the gathering and transportation costs.

A survey now is being made at Tulsa to determine how much "distress" oil is to be taken. No computation has been made as to the amounts purchased by local refineries. The small well production, which is threatened by Prairie's refusal to buy, is estimated variously from 12,000 to 28,000 barrels a day.

Since the breakdown of earlier conferences, President Hoover has continued to bring administration pressure to bear on the large oil companies to take their prorata share of the oil in the Mid-Continent field and to save thousands of small producers from destruction as the result of a loss of market. Secretary of the Interior Wilbur and Secretary of War Hurley have had direct charge of the negotiations and have insisted from the beginning that the plight of the Oklahoma-Arkansas producers would be solved.

The New York agreement comes just in advance of a meeting to be held here next Thursday, called by the governors of the two affected states, for consideration of the situation. Governors of other oil producing states have been invited to attend, as have the producers themselves. The announcement of the proposed meeting sets forth that it has been called "on account of the dire distress in the petroleum industry of the country and with particular reference to saving 300,000 small wells having a settled daily production of 500,000 barrels from certain abandonment if present conditions continue and the throwing out of employment of thousands of men employed in operating them and employed in kindred industries dependent upon the oil industry.

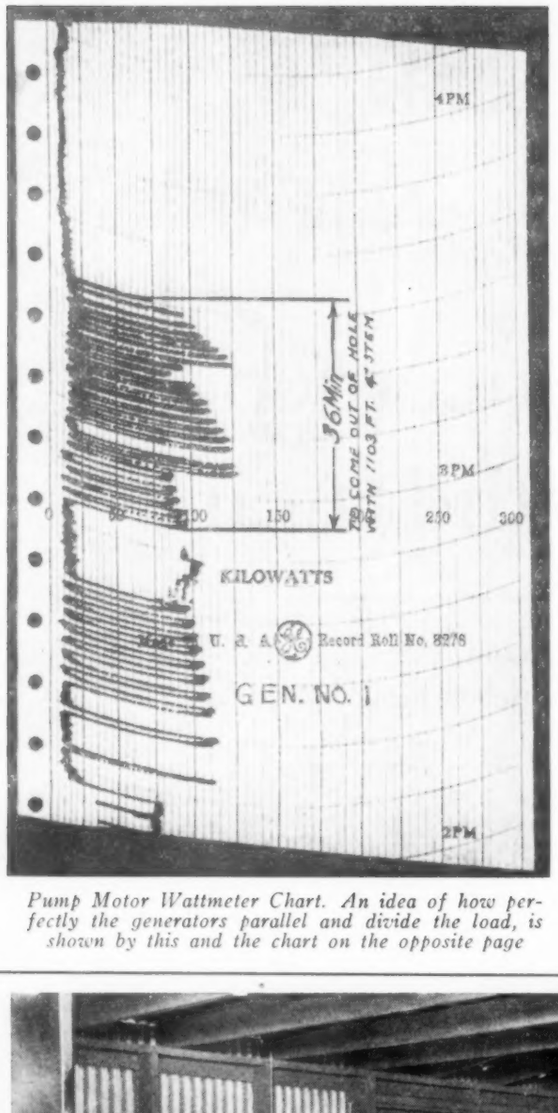
Just what has been the character of the influence, if any, brought to bear upon the big companies to induce them to come to the agreement said to have been reached is not known. However, the administration has been supporting them in their opposition to a tariff on crude oil and it is the imported oil that, it is alleged, is responsible for the condition of distress in the domestic oil industry.

It is conjectured that it might have been known that if the situation was not met in some satisfactory manner, nothing could or would stop present oil imports. The cry "farm relief" has been injected into the situation, since it has been pointed out that farmers and land owners of the oil-producing states own one-eighth royalties in all the oil produced and in addition the oil producing companies have under lease millions of acres, on which an annual rental of $1 per acre is paid in addition to the bonus or purchase price of the leases themselves, which has gone far to pay the farmers mortgages, taxes, and furnish him with a living during recent periods of low priced farm products and crop failures.

How the administration is going to be able to appease the oil men who propose to descend upon the city next week has been a matter to which leaders have been giving no little attention. The plan contemplated by Governor Holloway of Oklahoma and Governor Reed of Kansas, who sent out the call for the meeting, is the appointment by the governor of each oil-producing state of 25 or more accredited delegates from each, 20 of whom should represent the oil industry and five or more representing the interests of the people generally.

The emergency is so great that any considerable delay will result in the destruction of the petroleum industry, particularly 15,000 to 20,000 individual producers engaged therein known as independents, as well as the independent refiners and marketers. "The present situation in our opinion," the two governors stated, "has been brought about by a loss of market for oil produced in the United

(*Continued on page 59*)



Pump Motor Wattmeter Chart. An idea of how perfectly the generators parallel and divide the load, is shown by this and the chart on the opposite page

Direct Used Gulf Coast

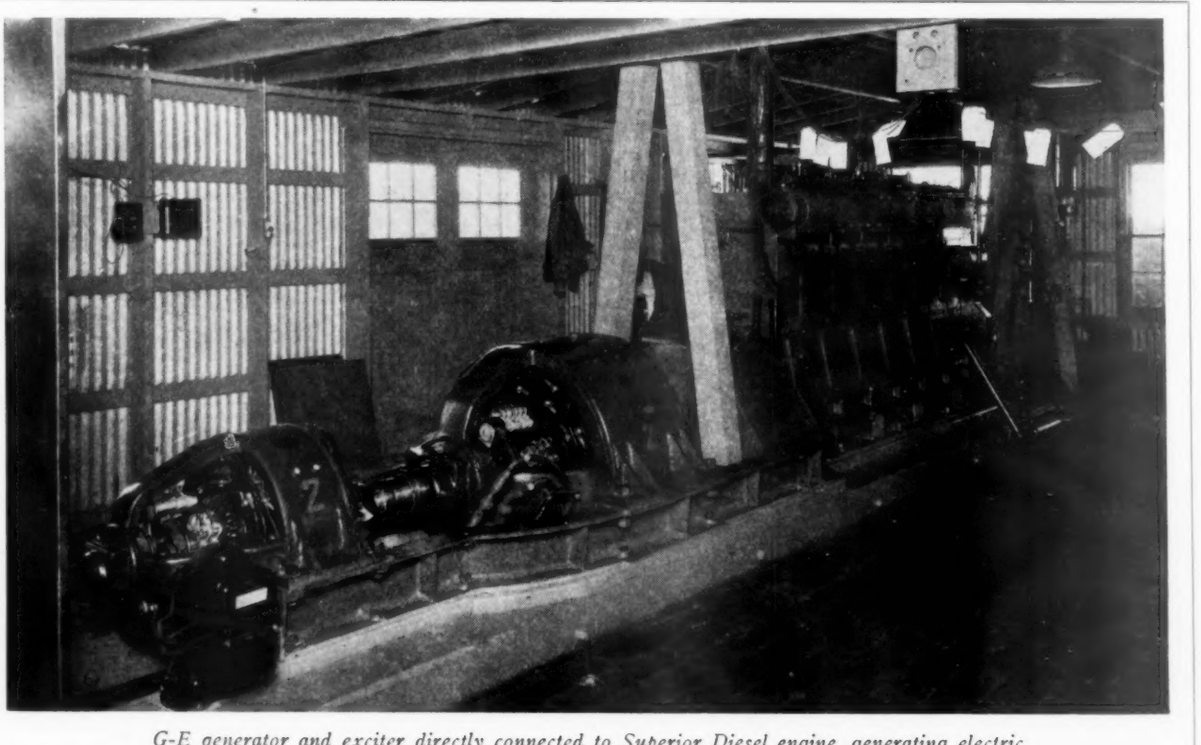
By GEORGE W. CURRY
Engineer, General Electric Company

SIXTY-FIVE miles south of New Orleans in the delta marshes of the Mississippi River, where Buccaneer Jean Lafitte held forth, a wildcat development is now under way which is unlike any present drilling rig in the Gulf Coast territory.

The geographical location is Lake Grande Ecaille Dome, Section 1-20s-26e, Plaquemine Parish, Louisiana.

Engineers are giving particular attention to the drilling equipment of this unique development and have frequently visited the operation to make personal observations and obtain data pertaining to this rig.

The drilling equipment consists of two generating units; each having one 210 H.P., six-cylinder 8½-inch bore type VDMA, 600 r.p.m. Diesel engine direct connected to a type CD-169, 125 KW., 250 volt direct current generator which in turn is direct connected to a type CD-105, 15 KW., 250 volt exciter. Under normal operation each unit supplies a 150 HP, 230 volt 450 r.p.m. type MDS-418 totally enclosed direct current motor. One of these motors operates the

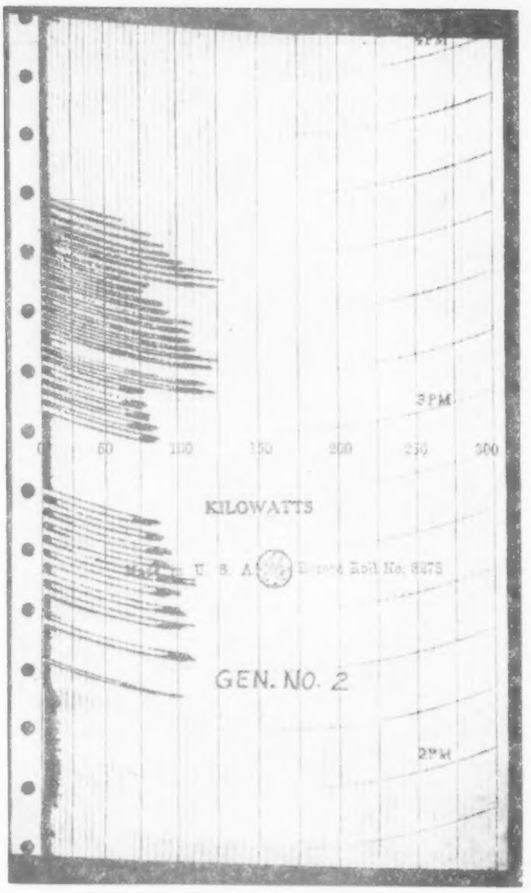


G-E generator and exciter directly connected to Superior Diesel engine, generating electric power for drilling, housed on a barge.

Current for Drilling Rig

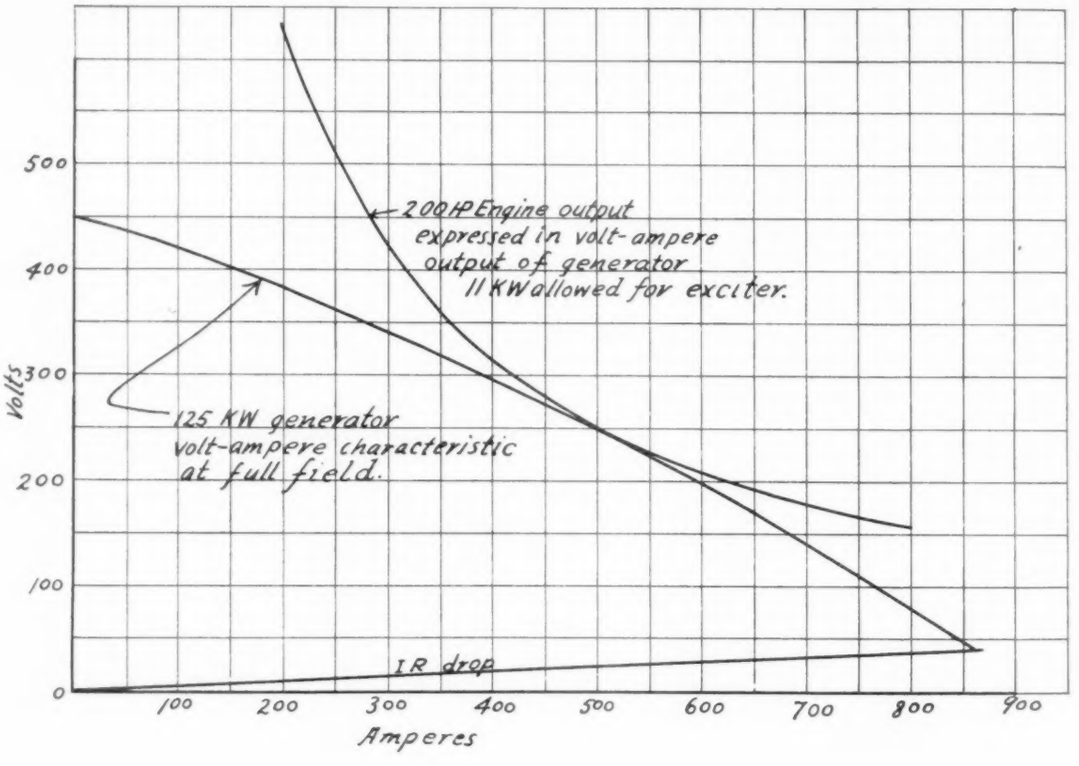
draw works, one the mud pump and one a duplicate spare. These motors are totally enclosed but are ventilated from a forced ventilation system; the blower intake being at a safe distance from the rig in order to eliminate any possibility of danger from igniting combustible gases.

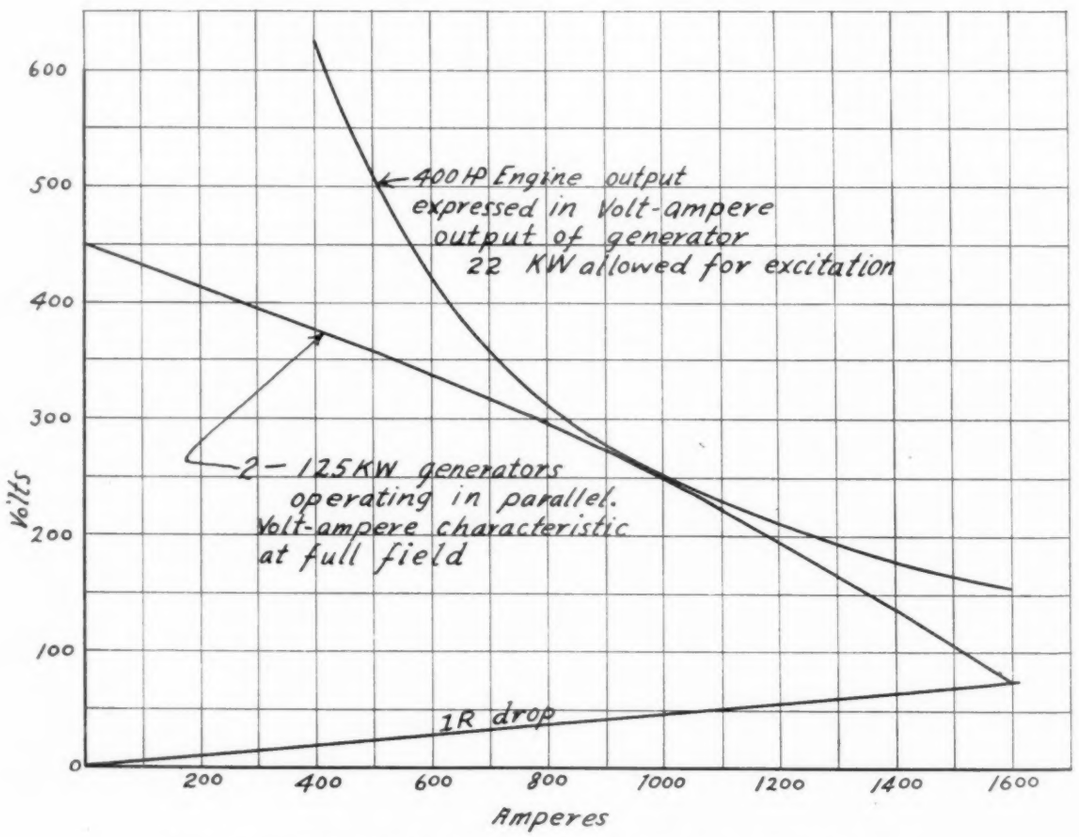
The control arrangement is standard Ward-Leonard system with provisions being made for parallel operation of the two units for supplying the drilling motor with the combined power output in order to increase hoisting speed. This feature is also provided for in supplying the mud pumps with maximum power available (i.e. 440 HP in the event that it is desired). This control is obtained by a panel located near the generating units; the panel having switches mounted for this flexible control. The single and parallel operation is obtained by push button control from the derrick floor. In addition to this, further changes can be made at the control panel by manually operated switches which provide for either unit to supply any one of the three motors and the parallel operation of the two units on either mud pump. These generators have a compound wound field with the series field being differentially connected, that is, so connected as to buck the shunt field



Drilling Motor Wattmeter Chart
(See chart on opposite page)

Derrick, power barge and living quarters for Cockrell-Moran No. 2, Lake Washington, Louisiana





Power consumption is automatically limited to the capacity of the Diesel engines, as shown on these charts

which feature will automatically prevent overloading of the engines. This differentially connected field characteristic also facilitates parallel operation of the generator and obtains the equivalent of double speed of the draw works motor at light loads which is a very desirable characteristic corresponding to that of a steam rig. In addition to the switching equipment and necessary indicating meters, curve drawing wattmeters and watthour meters are provided for each generator in order to obtain the output of each generator. The generating equipment is located on a barge, approximately 250 feet from the derrick with the control wires being brought from the derrick to the generator barge enclosed in a standard fire hose. This is an original idea for combining the control wires in one cable; obtaining both a minimum space and ample protection. Both control and power lines are suspended on poles.

Fuel Record

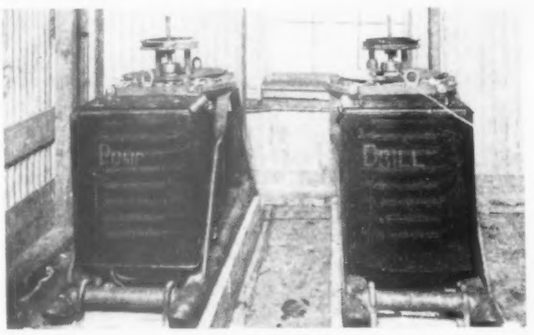
BHP Hrs.	Lbs. No. 31.6 Gravity Fuel Oil	Lbs./BHP Hrs.
237	393	1.66
78.6	200	2.54
161	200	1.24
153	400	2.61
183	200	1.08
102	200	1.96
73.3	100	1.38
95.5	300	3.15
141	100	.71
821	808	.98
699	900	1.29
428	600	1.40
286	300	1.05
291	607	2.09

Operation

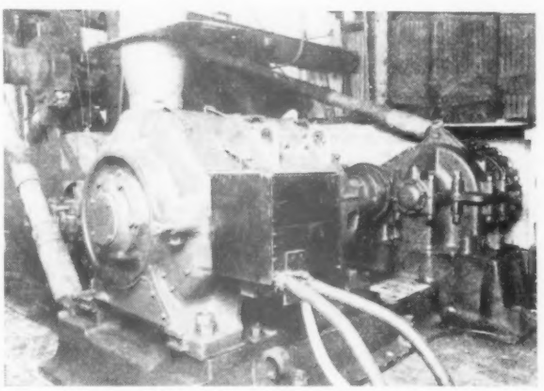
This equipment has been in service approximately six months and has been very satisfactory; commutation of the generator being good with no sparking at the brushes. The drilling crew is well pleased with the flexibility and fast speeds obtained.

The overall efficiencies have more than met the expectations of the engineers and an idea of these can be gained from the accompanying tabulated records of fuel consumption.

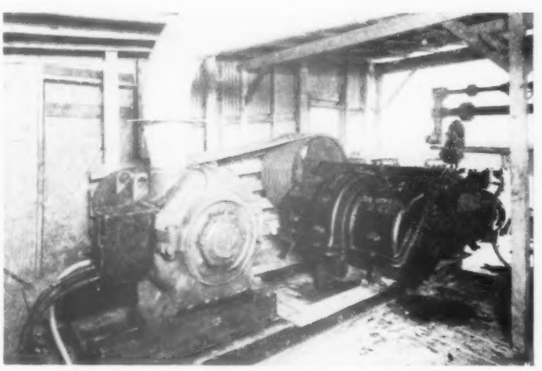
The actual sequence of operation is as follows: The set is started when the exciter generates full voltage and the motor field is energized. The hand wheel of the drum controller must be in the "off" position before any part will function, then the push button for start is operated which closes the master contactors on the control panel. When the controller is then turned to the first position which energizes the generator field from the exciter and with all field resistance in series, the motor then starts and operates at the slowest speed. As the drum controller is advanced point by point up to the last which is No. 21, the speed of the motor increases to a maximum of 850 RPM with a light load; the generator voltage being 450. On the application of further load the motor consumes more current and due to the differential action of the series field, the generator voltage decreases with a corresponding reduced speed of the motor down to 450 RPM with 150 HP load. The current at this full load is 500 amperes and voltage 250. At the time the engine is loaded to 200 HP, with further increase in load the motor current increases very rapidly and the voltage drops proportionately until at 800 amperes and 40 volts the motor stalls, at which



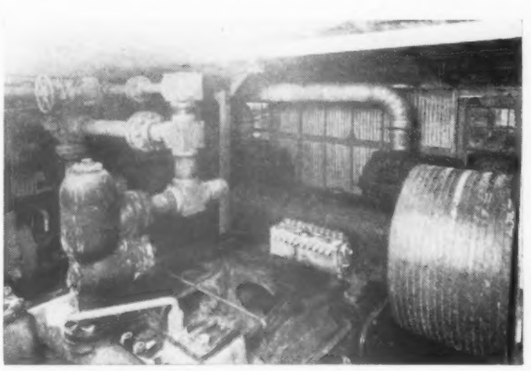
Generator-Field Controllers and Resistors



Enclosed forced-ventilated motor operated by Ward-Leonard control and driving draw works



Motor Driving Oilwell Mud Pump



Two motors arranged to operate the mud pump

point the engine is practically loafing. Thus it is evident that the power consumption is automatically limited to the maximum capacity of the Diesel engines; this being indicated on the accompanying curves.

When generator voltage is 250 and the current 500 amperes, the maximum output is obtained which is as stated, 200 H.P. An increase in motor load causes a further decrease in generator voltage and if continued to the consumption of 800 amperes, the generator voltage reduces to 40 volts when the motor will stall. If this condition prevails for 30 seconds a temperature overload relay in motor circuit trips and opens the motor contactors.

In hoisting, the generators are paralleled by an oil immersed master switch on the derrick floor. The combined power of the two generating units provide ample power for fast hoisting. An idea of how perfectly the generators parallel and divide the load is shown by the two accompanying curve drawing wattmeter charts obtained from actual service.

In transporting living quarters and drilling equipment to the location, the operators had to dredge a canal from the lake to the location, approximately a mile.

Living quarters, including a mess hall and office room, is a sectional house built onto a barge which is anchored at the end of the canal. The power house is also built onto a barge and anchored fast in a jet of the canal nearby. Tanks set on another barge transport the fuel to the location. Two speed-boats, capable of 35 to 40 miles per hour, ply between the location and the end of the automobile road as business requires. Licensed navigators are required to handle these boats since a mechanic not thoroughly familiar with these water courses effect a hazardous condition.

Salt water is being used in making circulating mud, and lime has been used by the operators as a neutralizing agent as a measure of protection to the pump parts. The circulating system, composed of two altered metal water tanks and a wooden trough, is set approximately 15 feet above the ground as is the derrick and pumps. The entire rig hook-up is set on a foundation of wooden piling, which is sunk as deep as 60 feet below the surface. Inasmuch as a man's weight would cause him to ordinarily sink several feet in the earth at points in this region, elevated board walks are used, with stairways serving the derrick floor, the tool house, pump platform and other working positions.

A steam operated blowout preventer, brought to the location to be placed on the well at around 3500 feet, will be hooked up with air pressure for operation in the absence of steam.

Surface pipe is 64 feet of 20-inch. Sixteen-inch casing was set at 355 feet, 12½-inch was set at 1103, and 9⅝-inch was set at 3209 feet. It is probable that this hole will be drilled to 7000 feet unless shallower pay is encountered.

Lake Grande Ecaille dome was located by seismograph, in 1928. The first test drilled following the geophysical discovery, had several shows of oil but not in commercial quantities, and was abandoned after topping salt at 1750 feet, confirming the seismic findings, in May, 1930. The second test, showed some heavy oil from sand around 5150 feet after bailing, but did not produce commercially, and after deepening to 5450 feet was abandoned in August, 1930. The third test encountered cap rock cavity near 1500 feet.

Electric lines from power to derrick, Cockrell Moran 2, Lake Washington, Louisiana. Note the use of ordinary fire hose used as insulation for electric cables

World Oil Survey Completed

R. E. Leigh, Associate Editor of The Oil Weekly, returns from visit to fields of Europe, Asia and Dutch East Indies . . .

R. E. LEIGH, Associate Editor of THE OIL WEEKLY, returned to Houston January 12, from Yokohama, Japan, having circumnavigated the globe, as well as the South American continent, in search of editorial material of interest to readers of THE OIL WEEKLY. His investigations took two years to complete and carried him into 19 different oil producing countries in South America, Europe, and Asia.

During 1929 Mr. Leigh covered every oil field in South America, gathering material for articles which appeared regularly in THE OIL WEEKLY, and in the Special South American Issue, published December 13, 1929.

Early in 1930 Mr. Leigh went to London to make final preparations for his survey of Old World fields. From London he went to Paris, where arrangements were consummated for visiting the fields in French Indo-China, including fields at Digboi, Yenangyat-Signu, Yenangyaung, Minbu and Burma. His itinerary after leaving Paris was as follows:

Paris to Germany including the fields in Hanover and Pechelbronn; thence to Italy where he studied the operations at Emelia; to Czecho-Slovakia and the Gbely field; thence to Poland where he visited the Boryslaw and Tustanowice fields; to Roumania, and on to the U. S. S. R.; thence to Persia where the Bibi Eibat, Khanikan and Maidan-I-Naftun fields were studied; on to Mesopotamia and the Iraq field; thence to Egypt where he surveyed the operations in the Hurghada Gemsah fields; thence to across India to penetrate into Siberia where he studied the Fergana development northeast of the Afghanistan border; here he doubled back into India where he visited the field in French Indo-China, previously mentioned; thence to Sumatra where he studied the fields at Perlak, Paja Balik, Tamiang, Djambi, Palembang and Kampong Minjak; across over to Java, visiting the developments at Samararang and Soerabaja; from there to the Island of Borneo, visiting the fields at Dalem, Sanga Sanga, Samboja, Tarakan, and Miri Laboean; then crossing to the Island of Ceram of the East Indies, he visited fields there, setting sail there for the Philippine Islands from whence he set sail for the Island of Formosa, visiting the Tabanti field; from this point he went to Japan, covering the fields at Niigata, Akita, Wakkundi, Kuhara, and Sakhalim, completing the world tour. Shortly thereafter he left for Yokohama from whence he sailed for the United States, landing at San Francisco.

Material gathered in his recent travels will be published in the Special Foreign and Statistical Edition, to be issued January 30, next.

Outstanding impressions of his travels in European and Eastern oil fields were summarized as follows in preliminary discussion with his associates of the editorial staff:

(1) The movement to curtail drilling and restrict production is now in general effect throughout the world, save in Russia and Japan.

(2) There probably will be no considerable increase or decrease in drilling operations in foreign fields during 1931.

(3) However, the supply trade should show a marked improvement as we enter the second year of restricted operations, since warehouse stocks have been depleted during the year which has elapsed since the restriction went into effect.

(4) The foreign oil industry henceforth may be expected to expand much more rapidly than the domestic, the reason being that the consumption of petroleum products in other countries is increasing more rapidly and is much less nearer the stabilization or saturation point than in the United States.

(5) The adoption of American methods and equipment, including European-made machinery of American design, is practically complete throughout the world, save in Ecuador, Germany and Poland.

(6) An unexpected result is that America's practical monopoly of the oil well supply trade and of the science of petroleum engineering has been broken. Oil well supplies are now being manufactured in England, Germany, Holland, Russia, Japan, and elsewhere; and European engineers, technicians, and apprentices are entering the oil industry in greater and greater numbers as each year goes by. American manufacturers, however may expect to retain the larger share of foreign trade in oil well supplies, so long as American engineers retain leadership in advancing the progress of the industry.

(7) America's share in this export trade may be expected to decrease, in percentage if not in volume, as the development of foreign fields continues. Many of our best customers in this trade have heretofore lacked not so much in adequate reserves of petroleum as in the technical skill with which to produce oil from indigenous sources.

(8) If the "Soviet Five-Year Plan of Industrialization" is carried through to success, Russia may one day surpass America as the greatest oil producing country in the world. Reasons supporting this startling assertion will be published in the forthcoming special edition.

Gravity and Output Respond to Repressuring Plan

Red River Field Shows Value of Air-Gas Injection Over Two Year Period

By J. C. ALBRIGHT

FOURTEEN months after the discovery of the famous Burkburnett townsite oil field in August, 1918, oil was discovered in what is now called the Red River field, about seven miles northwest of the town of Burkburnett. Since that time over 4,000,000 barrels of oil, with gravity ranging from 39 to 41 degrees A. P. I., has been produced. In all, about 250 wells were drilled, a number of which were dry and at the present time only about one-half of the original wells being in the productive zone.

During the height of the best productive period, a controversy arose between Oklahoma and Texas over the title to the properties. Suits and counter suits were filed and tried. A federal receiver was appointed to operate and drill the properties under dispute. In 1925, after about six years of operation under federal receivership, the United States Supreme Court rendered a decision which placed the Oklahoma state line at the south cut bank of Red River, and also decided that all land lying south of the medial line of the river was public domain.

This action placed practically all of the producing wells on government land. As the production of oil and gas on the public domain is under the care of the conservation branch of the United States Geological Survey a representative has been stationed in this area to supervise production and drilling, as well as to iron out all the difficulties arising between the various producers operating in the field.

The producing area is covered partly by Sections 3, 4, 5, 7 and 8, township 5- South, range 14 West, Tillman County, Oklahoma, and by a strip of land on the Texas side of the river in Wichita County, lying under the hills and between them and the south bank of the river channel. A structure map of the field, Muskogee Number 1015, prepared by the United States Geological Survey, with contours on the top of the producing sand, shows the field to be located on two structural "highs" with a producing area of about 500 acres on each. The eastern producing area takes the form of an unclosed narrow nose whose highest point is just south of the Red River in Wichita County, Texas, near the limits of production in the northwestern field of the Burkburnett district. This nose plunges northwestward across the SW of Section 3 and on across Sections 4, T.5s, R14w, and may die out — no further data

Burke Divide Oil Company's Consolidated, well No. 18. Showing method of protection from damage by driftwood during flood stages of Red River

being at hand. A minor closure is found on this plunging nose near the center of Sections 4, T.5s, R.14w.

A pronounced syncline that crosses the south quarter corner of Section 4 and extends in a northwesterly direction through the NE of Sections 5, T5s, R14w, separates the two producing areas. In the western area the strata rises gently from the syncline toward the southwest, and attain their greatest altitude in the north central part of the west ½ of Section 8, Township 5S, Range 14W, in a flat dome whose west and north dips are very abrupt.

Depth of Beds

The producing beds found in these two areas range from 50 to 75 feet in thickness and occur in the western area at depths between 1500 and 1625 feet, and in the eastern area between 1600 and 1725 feet. They consist of sand and sandy shale divided by shale and lime breaks that are fairly regular and can be readily correlated over most of the field. The productivity of the wells seems to be due to local sand conditions rather than to favorable structure. The wells on the crest of the structural "highs" are all small producers. The sand is thicker on the slopes of the highs than it is on the crests, and the wells have larger yields where the sand is thicker. The limits of the field are determined by pinching out of the producing sands, which grade off into sandy shales and shale and not by the dip of the formation to a point on the sides where a water level is encountered—which is the usual limit to the producing area of a field. There is no water level, as such, in the Red River field. Bottom water was encountered at about 1535 feet in the early days of the field, but today no water is found in the producing beds shallower than 1555 feet; and many wells are entirely free of water. As no water of importance is present, and because of the lenticular condition of the producing horizon, this field is especially adaptable to repressuring practice.

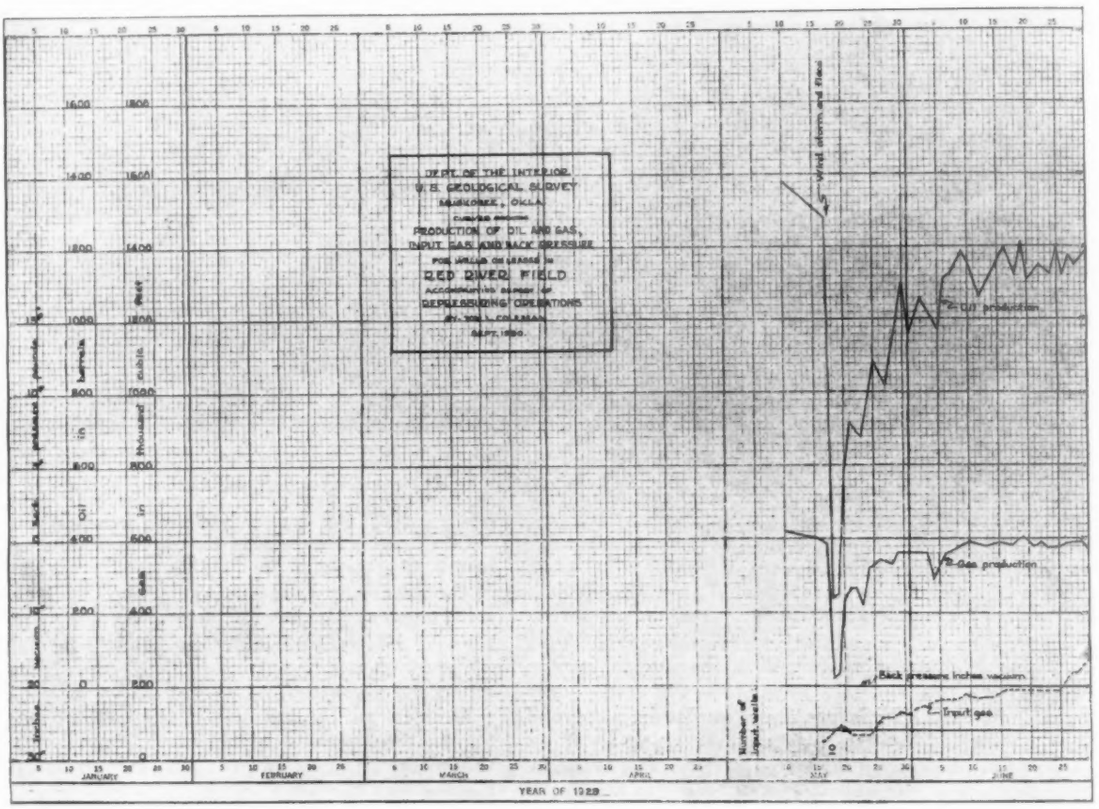
Almost from the inception of the field, casing head gasoline has been manufactured and in line with the practice in the northwest field, and the Burkburnett townsite, a high vacuum has been applied on the sand. The U. S. G. S. observer had established two zones for vacuum, the south side being allotted a vacuum limit of 26 inches mercury, while the wells on the public domain, north of the offset wells to the Texas locations were allowed to receive only 20 inches mercury vacuum. This condition has existed for a number of years, and had apparently drained the oil sands of all gas, as such. It had also depleted the residual oil of a quantity of the lighter fractions present when the field was first drilled into flush production. The oil at first was around 42 degrees A. P. I., and has lowered in gravity until in the spring of 1929, it was down to as low as 38/39 degrees A. P. I.

Bell Oil & Gas Company's well No. 228, Red River field, showing derrick piling left under the floor to protect connections in flood periods

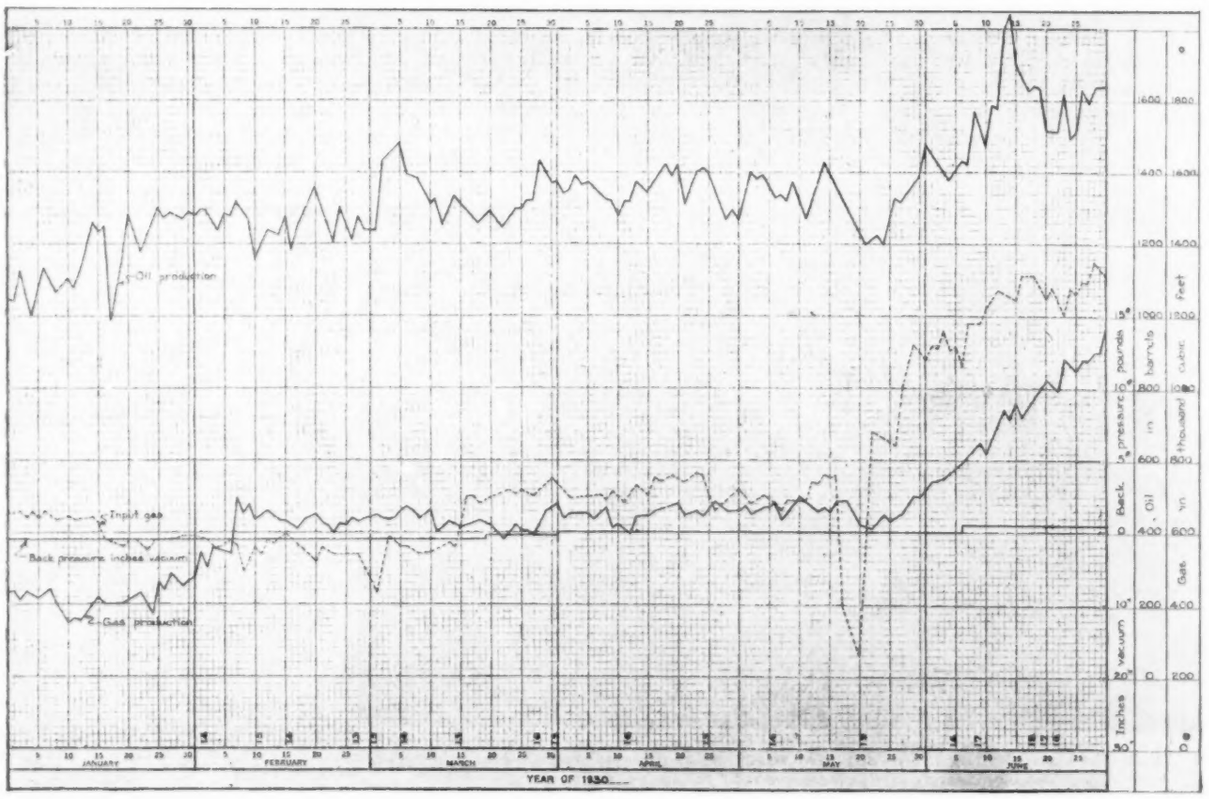
Ownership of Field

Bell Oil & Gas Company, of Tulsa, owns and controls about 55 per cent of the production in the field. Early in the year of 1929 they made representations

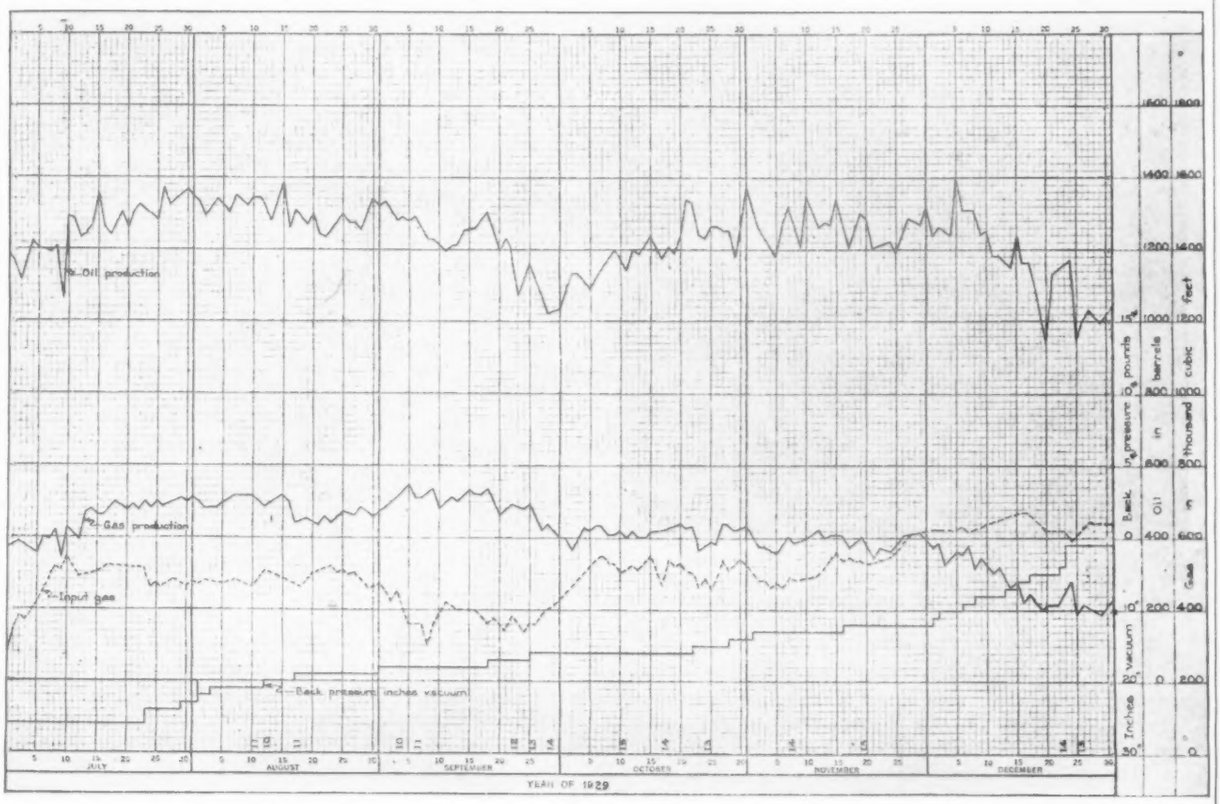
First Six Months, 1929



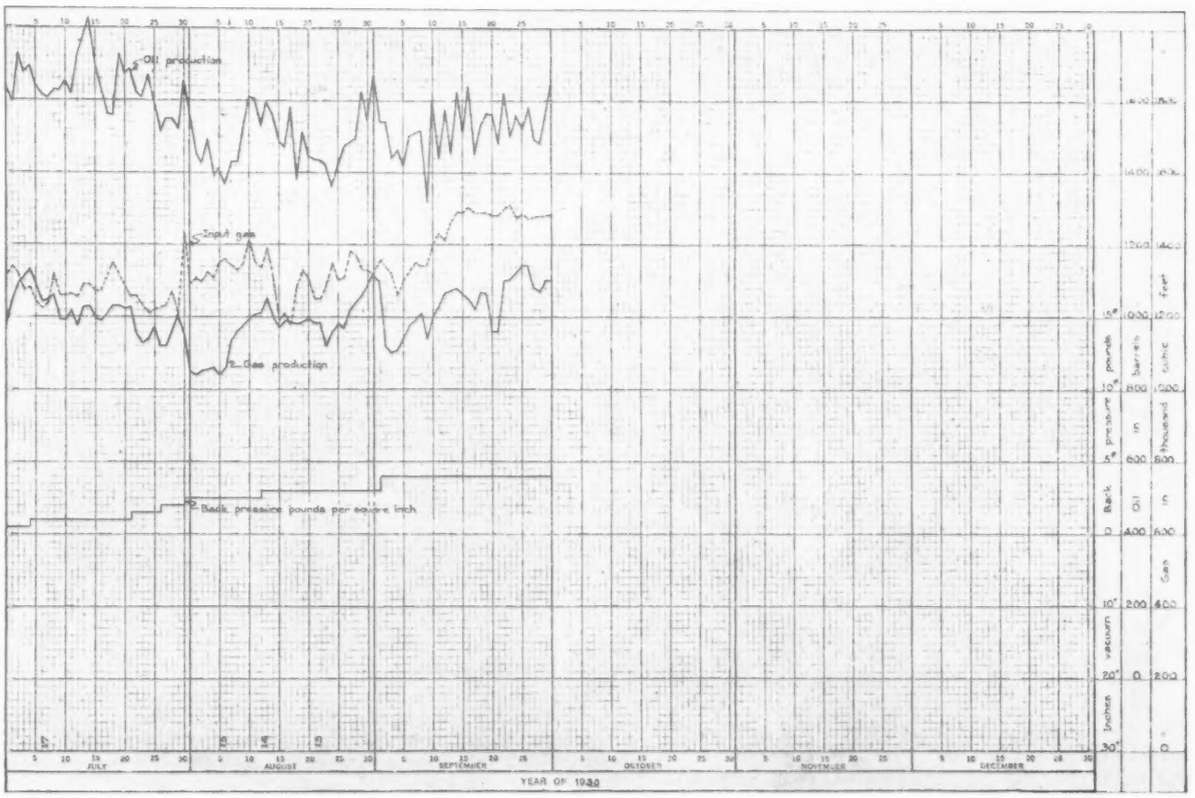
First Six Months, 1930

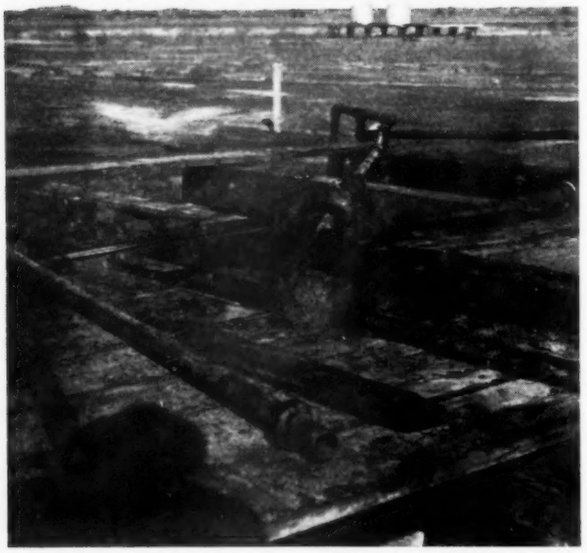


Last Six Months, 1929



Last Six Months, 1930





Bell Oil & Gas Company's well No. 228, Red River field. First well to be drilled as an input well. Showing connections with orifice flanges to measure gas injected through packed tubing, and through casing above packer

to the other producers that Bell Oil & Gas Company repressure the area. The other producers agreed that it might be attempted. Bell Oil & Gas Company then plotted a decline curve dating from January 1, 1928, to February 1, 1929. From this curve they formed a base for a proposal that they should receive a percentage of all oil and gas recovered from the field in excess of the amount indicated by the curve which was plotted, this agreement to extend over a period of 15 years. This was agreed upon between the contracting parties, and Bell Oil & Gas Company began laying distributing lines from the mains of Shasta Gas Company, which transports gas from the Panhandle of Texas and Western Oklahoma.

Nine wells were selected covering the area, mostly situated around the rim of the pool, with the idea in mind that the oil could be driven from the edge wells toward those in the center of the pool which were more productive. Wells Numbers 5, 190, 200, 218, 233 and 237 on the public domain, and the wells on patented land were Bell Oil & Gas Company's Capshaw 5, Bell Oil & Gas Company's Allen 1, Superior Oil Company's Owens 3. These were connected as input wells. On May 17, 1929, gas injection was begun with an input volume of 60,000 cubic feet, with a line pressure of 50 pounds.

The two vacuum zones were consolidated, and an agreement was made between the producers and the United States Geological Survey observer that 23 inches of mercury was the maximum vacuum that could be applied to the producing sand.

Under this method of operation, that of gas injection on one hand and vacuum on the other, very discouraging results were obtained. The pressure at the input well heads was in many instances as low as nine inches of mercury vacuum.

After about six weeks of operation under these conditions, the gas input was gradually increased to 200,000 cubic feet, and some of the wells showed an increase in production. Thinking, of course, that this increase was attributable to the injection of gas, the input volume was increased to 500,000 cubic feet daily. Gas production was increased to a marked degree but no further effect was felt on the production of oil.

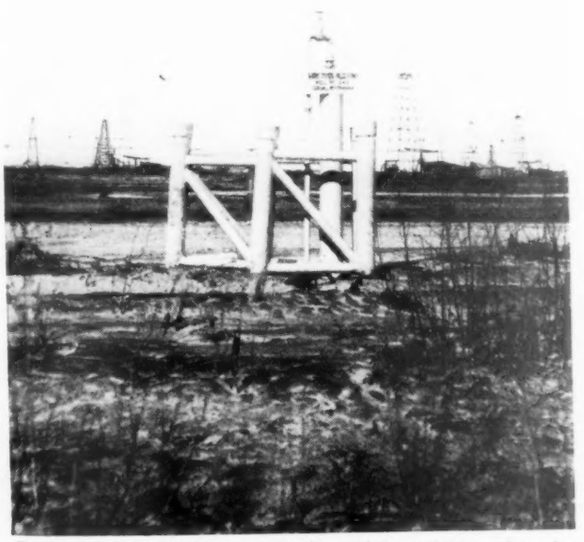
This result could be from no other cause than the channeling of gas through the upper part of the sand of the producing horizon. The rapid rise in the production of casing head gas was rather alarming as well as discouraging. Three ideas were advanced to remedy the condition. Either the tubing must be raised to a sufficient height to permit the sand to be covered with oil, the vacuum must be lowered, or the wells showing the highest ratio of return gas should be pinched in at the casing head. The latter method was resorted to. Stops were installed in the vacuum lines at the casing heads, and the gas production was lowered.

No great benefit resulted, consequently the operators saw no other way out than to lower the vacuum. This was agreed upon but with reluctance, as the operators remembered quite distinctly the results experienced when the vacuum station of The Texas Company should be shut down for any reason. However, to apply repressuring, they knew there could not be a vacuum and a pressure at the same time; so the vacuum on the sand was lowered a few inches at a time during the summer of 1929. No increase was made in the input gas, and a very little increase in barrels of oil was recorded. The production curve remaining almost flat.

The condition of the wells first selected as key wells were such, owing to the rapid rate in which they were drilled, and the careless manner that the casing was set, coupled with the enlarged shot hole, made it seem imperative that new wells should be drilled to receive the input gas.

A location was agreed upon, and Bell Oil & Gas Company spudded in well Number 228 on lease Guthrie Number 014098-850 shown in illustrations Numbers 1 and 2. Drilling was begun on August 25, 1929, and the well was completed September 21, 1929. Three feet of oil sand was encountered between 1528 feet and 1531 feet. A core barrel was run from this point down to 1598 feet, the cores being analyzed to show at which point the greatest porosity would be found in the sand as well as the location of the shale and lime breaks.

Underneath the first sand, shale was found at 1531-36 feet. The 6⅝-inch casing was set in this shale, and the first sand cemented off. A fairly tight sand was encountered between



Burke Divide Oil Company's Consolidated 242 at the edge of the south channel of Red River

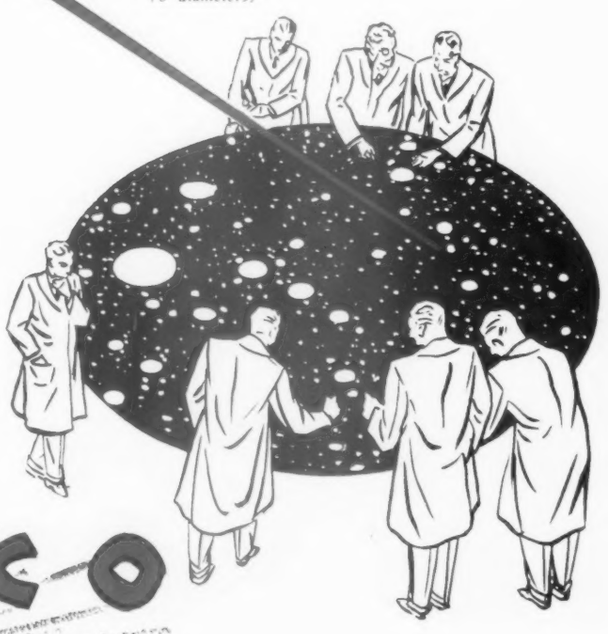
The Official OIL DOCTOR *Says*

EXPERTS agree that there is safety in experience. It is the only dependable counter-balance for experiment.

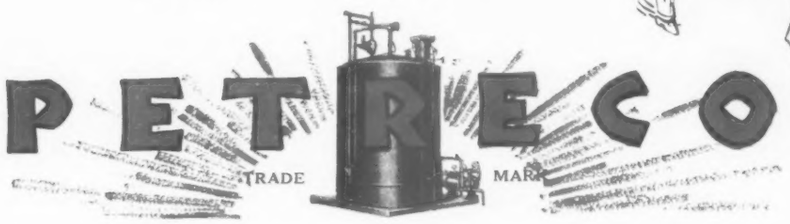
More than twenty years close contact with the various "cut oil" problems encountered in the oil fields of the world, enables Petreco engineers and technicians to predetermine the correct application of the Petreco Process to each specific case. Examination of your "cut" oil in the Petreco Laboratory, and detailed recommendations for its treatment entails no obligation.

The Petreco Process does not *crack* the oil, but conserves the lighter volatiles to a high degree. It is a process of de-emulsification and recovery—recovering all the oil from the emulsion while restoring the entire production to its original gravity. It is practically automatic in operation; exceptionally clean; and requires minimum labor attendance. Plants now operating are successfully treating emulsions which vary from 11° to 40° A.P.I. in gravity, having water contents as high as 80%. Write for Bulletin No. 30-3 for detailed information.

Photomicrograph (magnified about 70 diameters)



PETROLEUM RECTIFYING CO.
OF CALIFORNIA
530 W. SIXTH ST. LOS ANGELES, CALIF.
412 PETROLEUM BLDG. HOUSTON, TEXAS
2015 FT. WORTH NAT'L. BANK BLDG. FORT WORTH, TEXAS



Fully covered by process and apparatus patents.

Bell Oil & Gas Company air station with meter loops and regulators. Red River field. U. S. G. S. observer's office in right background

1536-63 feet, below which two feet of shale were cored. From 1565-75 feet a fairly porous sand was found overlying a foot of lime. From 1576-97 feet, 21 feet of soft heavily saturated sugar loaf sand was cored.

The bottom of the hole ending in lime, with a lime shell above the last 21 feet of soft sand, presented a condition thought ideal for gas input, so a packer on a string of two-inch tubing was placed in the lime shell above the sand and gas injection was begun. After two weeks of gas input, this lease increased from 60 to 160 barrels production, which has been maintained to the present time.

Results Gratifying

With the gratifying results obtained from gas injection in a well drilled solely for the purpose, both Bell Oil & Gas Company and Burk Divide Oil Company, Ltd., decided on a campaign of drilling more wells for input purposes. Locating them as best they could with the meager logs of the old producing wells to guide them, the wells were drilled over the area to give them the best possible opportunity of applying the gas where in their opinion it would exert the greatest driving power. All of the subsequent wells have been drilled and completed in the same manner as well Number 228.

In December, 1929, the vacuum held on the sand was lowered to two inches, with a small increase in injected gas, but with a distinct loss in oil and gas production. These operating conditions remained with rather constant results until the first week in February, 1930, when oil production climbed to above 1200 barrels daily, and the gas production exceeded the input volume. In April, Burke Divide Oil Company, Ltd., decided to recondition its input well Number 218, shown in illustration Number 3. This had been an old producer, and one of the first wells through which gas injection was applied. The bottom of the hole was 1558 feet, and after rigging up a large amount of junk was found in the well which could not be fished out.

However, with great difficulty, the hole was deepened to 1590 feet, penetrating some 20 feet of productive oil sand below the old bottom. The company attempted to cement the pipe in the same manner the new wells were finished, but the condition of the large shot hole prevented this operation. After failing to shut off contact with the upper sand, the well was nevertheless placed in operation again as an input well, and within a short time production from the surrounding wells showed a marked increase. Some of them showed as much as 100 per cent over that previous to deepening. The great difficulties encountered in this hole discouraged any further attempts at reconditioning old wells for repressuring. The interested companies decided that better results might be obtained by spending a little more money in drilling new wells for gas injection.

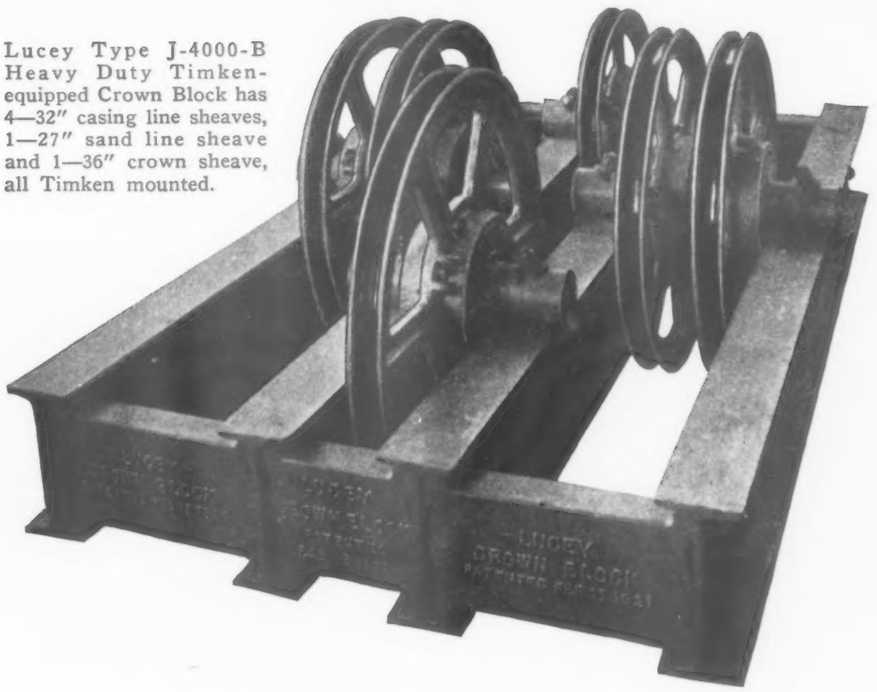
About the middle of May, 1930, the gas input volume fluctuated from 750,000 cubic feet to below 300,000 cubic feet, with a decided drop in oil and gas production. After a few days, and at the time of replacing input well Number 218, the volume of input gas was raised to 1,000,000 cubic feet, with both oil and gas production rising sharply. At about the same time the back pressure was raised from atmosphere to one pound gauge, showing that at last the sand had become saturated with gas. At this time it was estimated that about 100,000,000 cubic feet of gas had been injected to bring about this saturated condition.

Air Station Erected

During the summer of 1930, Bell Oil & Gas Company, with the sanction of the Conservation Branch of the United States Geological Survey, erected an air station with which to blend gas and air for injection purposes. A twin belt driven Ingersoll XOB compressor with an 11 by 10 low cylinder and a five by 10 high cylinder, operated by a 75 horsepower Westinghouse 440 volt type CS induction motor, was installed in a building adjacent to the oil pipe line pump station. The agreement is that there cannot be more than 25 per cent air in the total volume of repressuring medium.

The air is sent to the field under 85 pounds pressure, and is used in the north half of the field with the dry gas from the mains of Shasta Gas Company. Casinghead residue gas is applied to the input wells in the south half of the field. No injurious effects have been experienced due to the injection of gas-air mixture.

Up to the period marking the beginning of repressuring there has been about 600,000 cubic feet of casing head gas produced daily, with an available gasoline content of eight gallons per 1000 feet. When vacuum had been removed en-



Lucey Type J-4000-B Heavy Duty Timken-equipped Crown Block has 4—32″ casing line sheaves, 1—27″ sand line sheave and 1—36″ crown sheave, all Timken mounted.

Lucey Timken Bearing Equipped Crown Blocks Show Their Stamina in Deep Field Service

"Out of sight, out of mind", aptly applies to crown blocks.

Perched high on the tops of the derricks, where access is not easy, they generally receive scant consideration; "nursing" mechanical equipment is something the oil fields can find no time for.

But Timken-equipped crown blocks require very little attention.

No matter how severe the service is—in drilling or production—sheaves turn with the same frictionless cable-saving smoothness—always in alignment and with their small lubrication demands amply provided for by grease-tight reservoirs.

Radial-thrust loads are held in complete subjection by Timken tapered construction, adding years of usefulness to crown block life, and making maintenance a matter of little consequence.

The same Timken characteristics are saving time and money in all kinds of oil field equipment. There are more Timken Bearings in the oil fields than all other makes combined. The Timken Roller Bearing Co., Canton, Ohio.

TIMKEN *Tapered Roller* **BEARINGS**

tirely from the producing sands, the content of this gas had dropped to three gallons per 1000 feet of gas produced. The oil gravity had raised from 38/39 to above 42 degrees A. P. I., being approximately that of the oil at the time of the discovery of the field. This condition may be accounted for by the gas being dissolved in the oil. As of December 26, 1930, gasoline content has dropped to 2.44 gallons per 1000 feet, and the gravity of the oil has lowered to 41 degrees A. P. I. Back pressure on the field is maintained at 3½ pounds, and oil production has gained to 1800 barrels daily, with a gas input of 1,600,000 cubic feet. The gas-oil ratio varies in very wide limits, there being reports of from 265 to one, to 6200 to one. No one connected with the project seems able to give a satisfactory reason for the wide differences. The gas production has equaled the input volume, and oil production has gained 400 barrels daily from the entire field. The cost of the gas for repressuring that is bought from Shasta Gas Company is 16 cents per 1000 cubic feet. Other costs are not available, but some of the lifting costs are reported to be as low as 25 cents per barrel.

List of Input Wells

The input wells are listed as follows:

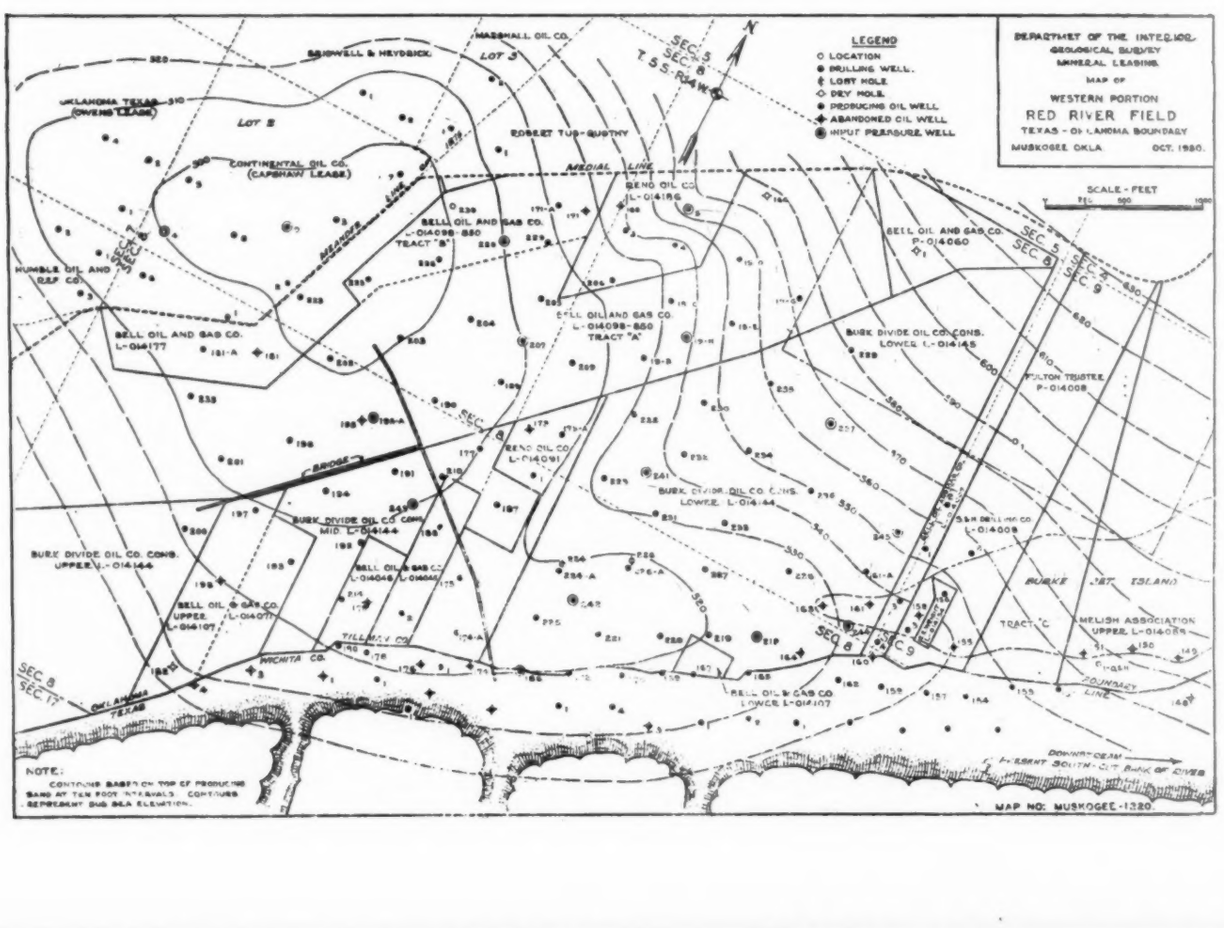
Bell Oil & Gas Company, Guthrie lease 014098-850.
Well 19-H, injection begun September 3, 1930.
Well 195-A, injection begun May 21, 1930.
Well 207, injection begun November 8, 1929.
Well 228, injection begun September 23, 1929.
Capshaw 4, injection begun June 19, 1930.
Capshaw 9, injection begun March 15, 1930.
Burke Divide Oil Company, Ltd., Guthrie 014144.
Well 218, injection begun May 17, 1929.
Well 237, injection begun October 11, 1929.
Well 241, injection begun January 5, 1930.
Well 242, injection begun March 8, 1930.
Well 243, injection begun June 9, 1930.
Well 244, injection begun July 7, 1930.
Well 245, injection begun August 8, 1930.
Reno Oil Company, Guthrie 014186.
Well 5, injection begun May 17, 1929.
Wicher 186, injection begun June 3, 1930.

With the above 15 input wells, taking a total of 400,000 cubic feet of air, 400,000 cubic feet of dry natural gas and 800,000 cubic feet of returned residue gas, input wells are regulated to take a little more than 100,000 cubic feet each daily. The gas and air is regulated by manual control, and is supervised by a Bell Oil & Gas Company engineer who resides near the properties.

The project as a whole has proven very beneficial, and as soon as economic conditions justify, many of the old producing wells will be cleaned out and deepened to the lime below the last strata of soft sand.

The accompanying graph Number 1 shows the amount of gas input, the gas production, the back pressure applied to the field, the production in barrels of oil over a period beginning with the inception of the gas injection until the present time. Map Number 1 shows the location of the wells in relation to the river, stratiographic depth, and the input wells in relation to the pumping producers. Graph Number 2 shows the decline and rise of the production of oil under government supervision.

Acknowledgement is made to Tom L. Coleman, district engineer, United States Geological Survey, located in the Red River field, for his co-operation and the use of material to be included in a report "Repressuring Operations in the Red River Oil Field, Tillman County, Oklahoma."



Everything Is Unusual *At* Kettleman Hills

By BRAD MILLS
Staff Representative

THE impending development of the Kettleman Hills field makes this area one of the most interesting in the country. Regardless of the success of the proposed two-unit plan of operation, field work will be pursued during the latter part of 1931 with renewed vigor. Even an orderly development should lead to greatly increased activity at some future time, and both operators and equipment manufacturers are considering a probable plan of attack. The nature of the field invites hand-tailored ideas and each well seems to require special attention.

Anything that has happened at Kettleman Hills has been interesting. The field has gained a great following and any new development has been heralded far and wide. Almost every detail has been either the "biggest in the world" or the "first of its kind." The place it has won among the oil fields of the country might be compared with the place Lindbergh has won in aviation.

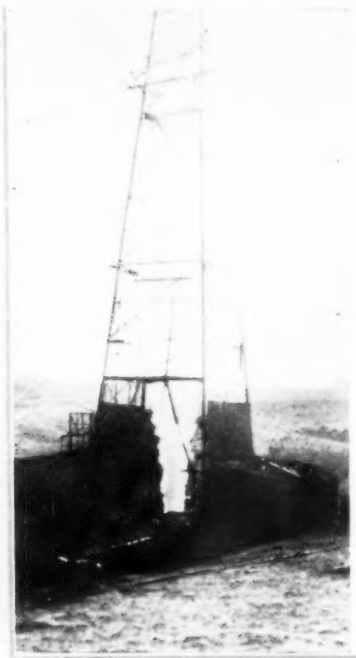
A Kettleman Hills gasser running wild

Both sailed into prominence in a spectacular manner and both have held their high positions through merit and ability to produce under all conditions.

General events leading up to the discovery of Kettleman Hills, the geology, equipment used, drilling practices, production practices, quality of the oil, and even peculiarities of various wells are of interest, and every phase of past development is being studied in an effort to make each future move most effective.

Kettleman Hills was the first oil field ever discovered at a depth below 7000 feet. Many producers had been completed at much greater depths, but when Milham Exploration Company's Elliott 1 blew in late in 1928 from 7236 feet a search of 20 years ended, and the long narrow strip which from a distance resembles a crawling worm, took its place among the proven fields of the state.

California had long been accustomed to heavy oil production and



Continental Oil Company's Elliott 12-8—derrick being blown to pieces. The lower pictures show, successively, condition of the derrick soon after the blowout, and tunneling done to bring the well under control

doubted the value of a field which threatened to produce an oil much nearer pure gasoline than ordinary crude oil. The discovery created a new conception of field valuation, flowing nearly 5000 barrels of 60.4 gravity oil and around 100,000,000 cubic feet of gas. After a continuous flow of several months, the discovery was accepted as bona fide and various companies fortunate enough to hold acreage or government permits awoke to the realization that they had become operators in an entirely new type of field.

Persistent operators drilled for more than 20 years on the theory that such a structure should produce oil in commercial quantities. Early attempts merely scratched the surface, many wells having been abandoned at less than half the necessary depth. These failures took the courage out of many companies and valuable leases changed hands at a fraction of their actual worth.

Geology

The geology of Kettleman Hills is most interesting. The early belief that only the Pliocene should prove productive in California checked progress and may have postponed the discovery of the field. Surface indications led geologists to believe that the structure would be a disappointment if it didn't produce, but wells drilled to depths below 6000 feet had failed to reveal what normally should be expected from such a formidable anticline. Geologists had been attracted to and even intrigued by the structure, lying out in the valley and as plain as the nose on a man's face. As a matter of fact, drilling technique had failed to keep pace with geological theory and the deep producing zone long evaded the drill.

Any oil field draws from syncline to syncline. These synclines may be 10 miles apart, yet the oil field may be only one mile wide. The top is a cup which collects oil from the entire structure, regardless of the size of the drainage area or structure. The outlet, through the medium of producing zones tapped from the surface, may be very small in comparison with the syncline-to-syncline draining area. As will be observed, Kettleman Hills is both a large field and an outlet for an enormous drainage area.

The Temblor zone, from which Kettleman Hills is supposedly producing, is the third deepest of the four groups in the Miocene age, the Santa Margarita and Monterey Shales lying above it and the Vaqueros lying immediately below it. The zone is practically free from fossils which definitely identify it, and for this reason some geologists believe that the formation may prove to correspond to the deepest producing zones in the Los Angeles basin. Both are assuredly in the Miocene group.

On top of the structure, a well cuts about 500 feet of the Etchegoin and about 4000 feet of the Jacalitos, both falling in the Pliocene age. The Santa Margarita, Monterey shale and Temblor are then found in the order named, accepting the Temblor zone as the one from which production is obtained.

Kettleman Hills is not necessarily a great field by accident. There are definite reasons why it is feared as the greatest producer of the age. It is, however, a great triple freak, from a geological standpoint, and stands in a class by itself for at least three definite reasons. A leading geologist has classified the three reasons for Kettleman Hills' greatness as follows:

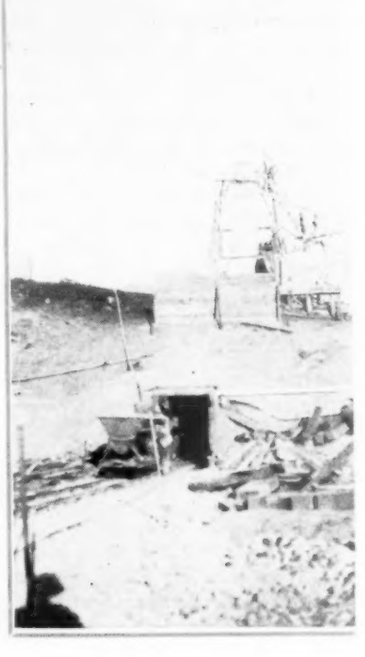
1. California, as a state, has the greatest organic deposits in the world, with up to 5000 feet of organic deposits below the oil sands.

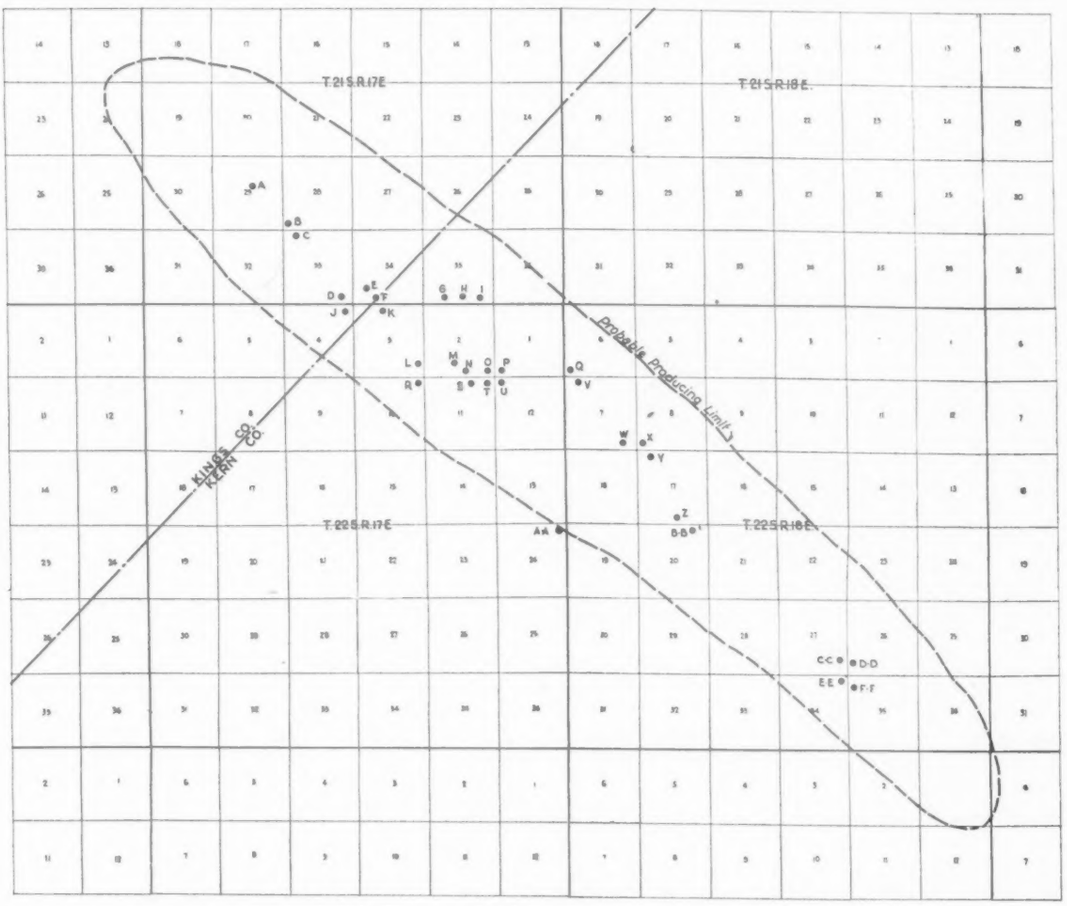
2. The San Joaquin Valley is the largest basin in California, being perhaps 10 times as large as the Los Angeles basin.

3. Kettleman Hills is a freak structure, in being an anticline (in three domes) almost 10 times as large as Long Beach or Santa Fe Springs.

By studying the foregoing reasons why Kettleman Hills should be one of the greatest fields of all times, it is obvious that the field stands on a pyramid of circumstances which combine to give it many advantages.

The Long Beach field, which has already produced 400,000,000 barrels of oil and which has an area of only 1400 acres, drains only about 30 square miles of the Los Angeles basin. Kettleman Hills probably drains more than 200 square miles and has other advantages on a par





A - SUPERIOR OIL CO'S. HUFFMAN NO. 1
B - MILHAM EXPL. CO'S KENNEDY NO. 1
E - STANDARD OIL CO'S. NO. 33 J - 21
D - STANDARD OIL CO'S. NO. 33 J - 78
E - PACIFIC WESTERN'S KETTLEMAN NO. 27
F - MILHAM EXPL. CO'S. BEAL NO. 1
G - STANDARD OIL CO'S. NO. 35 J - 38
H - PETROLEUM SECURITIES CO'S. FELIX NO. 1
I - ASSOCIATED OIL CO'S WHEPLEY NO. 1
J - GEO. F. GETTY'S ARMSTRONG NO. 6-1
K - STANDARD OIL CO'S. NO. 3 P - 41
L - STANDARD OIL CO'S NO. 3 P - 87
M - CONTINENTAL OIL CO'S. ELLIOTT NO. 2-13
N - MILHAM EXPL. CO'S. ELLIOTT NO. 2.
O - MILHAM EXPL. CO'S. ELLIOTT NO. 1 (DISCOVERY WELL)
P - STANDARD OIL CO'S. NO. 1 P - 9
Q - GEO. F. GETTY'S ARMSTRONG NO. 6-1
R - STANDARD OIL CO'S. ARMSTRONG NO. 1 6P - 81
S - STANDARD OIL CO'S. NO. 11 P - 261
T - STANDARD OIL CO'S. NO. 11 P - 81
U - CONTINENTAL OIL CO'S. ELLIOT NO 12-8
V - STANDARD OIL CO'S. NO. 7 Q - 21
W - STANDARD OIL CO'S. NO. 7 Q - 78
X - SHELL OIL'S ARMSTRONG NO 8-1
Y - STANDARD OIL CO'S. NO. 17-Q-21
Z - STANDARD OIL CO'S. NO. 17 Q - 58
A-A - BOLSA CHICA OIL'S FERGUSON NO. 24-1
B-B - GENERAL PETROLEUM'S OSCHNER NO. 20-2
CC - STANDARD OIL'S NO. 27 Q - 87
DD - GENERAL PETROLEUM'S OSCHNER NO. 26-2
EE - ASSOCIATED OILS WATSON NO. 34-1
FF - STANDARD OILS NO. 35 Q - 2

● WELLS SHUT IN
● WELLS PRODUCING

MAP OF

KETTLEMAN HILLS FIELD

CALIFORNIA

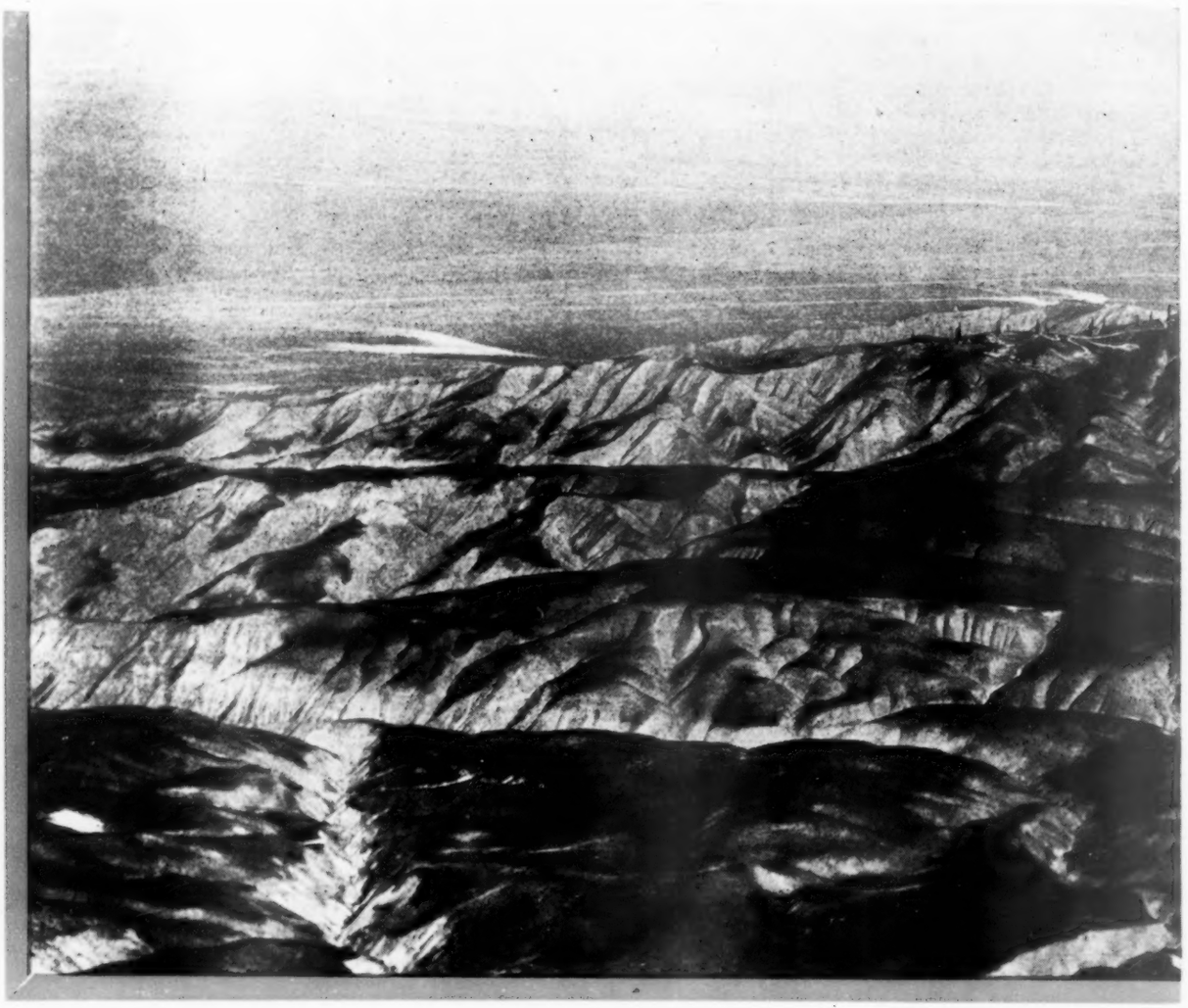
with either Long Beach or Santa Fe Springs. Even though the outlet does not prove as large as expected, through the medium of surface area and producing zones, the drainage area is present and the North Dome should eventually yield more oil than the three domes were estimated to contain before the field was discovered.

Only Two Domes Likely

Kettleman Hills has long included the North, South and Middle Domes, at least as far as it was possible to determine, but there is a strong possibility that the field will include only the North and Middle Domes, and that the South Dome will prove to be connected to the Lost Hills field, which lies exactly in line. As a matter of fact, the South Dome lies more nearly in line with the Lost Hills field than with the Middle and North Domes. A deep test on the northwest flank of the South Dome was dry, although the well was drilled below 8000 feet.

The known productive area on the North Dome alone stands at 13,000 acres, with a larger acreage to be included if this part of the field meets expectations. The Middle Dome has not been proven, but there is ample evidence that it will yield oil in commercial quantities. It may be even as productive per square acre as the North Dome. The productive area of the Middle Dome should not exceed 3000 acres. We are chiefly concerned with the North Dome, because we know most about it and because it is so much larger than the Middle Dome.

Various estimates as to the probable recoverable oil in the North Dome have been made, and each has added to the confusion concerning the possibilities of the field. Estimates run all the way from 60,000 barrels per acre for



Aerial view of the North Dome

the 13,000 proven acres to 300,000 barrels per acre. The thickness of the producing zone is not known and several other factors will affect the ultimate recovery per acre. A recovery of 100,000 barrels per acre would give the North Dome alone a reserve of 1,300,000,000 barrels. Arguments are advanced that deeper producing zones will be found, but such a theory may not prove correct. Long Beach has produced nearly 250,000 barrels per acre, but such an average seems too high for Kettleman Hills.

The position of the oil in the sand and the concentration of gas on top of the structure are leading factors in calculations leading to estimates of the probable recoverable oil per acre. The first producers flowed a very light oil and an unusually high ratio of gas to oil. If the main head of gas is dissipated in the production of only a small amount of very light oil on top of the structure, the edge wells producing the heavier oil may suffer when gas is needed most. The discovery well and a few subsequent completions indicated that the field would produce only a very light oil, but the most recent completion on the flank of the structure flowed a 40 gravity oil with a decidedly heavier base. This well did much to unravel the mystery of the extremely light production on top of the structure and proved that the first wells were flowing from the top of the sand and that the lower body of the formation contains heavier fractions.

Since the first wells produced a crude containing almost 90 per cent gasoline, it was evident that the condensing of a part of the huge gas flow was partially responsible for the light product. The discovery well blew wild for several days and the oil was practically dissipated. The highest estimates gave the well a production of 200 barrels per day. When brought under control, the well produced almost 5000 barrels of 60.4 gravity oil. Evaporation had been so nearly complete that the well seemed to be producing only gas. California was wholly unprepared for such a spectacular performer, and for once estimates fell far short of actual production. Evidently the Temblor zone of the Miocene contained much more than was anticipated by even its most optimistic followers.

Drilling technique at Kettleman Hills seems considerably in advance of field development in any other district. Certainly conditions do not parallel those in any other field and experience has been the best, even if the most expensive, teacher. Heavy equipment, high pressure fittings, special alloy casing and individually designed specialties have played an important part in the drilling of the 30 wells.

Overcoming of the mental hazard was an achievement, but the success of development lies more in increased skill than in luck. A well-known petroleum engineer, when asked what he considered the most important phase of development at Kettleman Hills, replied that it was the ease with which operators were drilling to 8000 feet that impressed him most. He insisted that it was the improve-

at Kettleman Hills, California

ment of drilling equipment and methods that accounted for the ease and speed of drilling.

Kettleman Hills has been a veritable proving ground for all kinds of equipment. Manufacturers have vied with each other to install specialties of all kinds. If equipment stands up in this field, it will stand up anywhere.

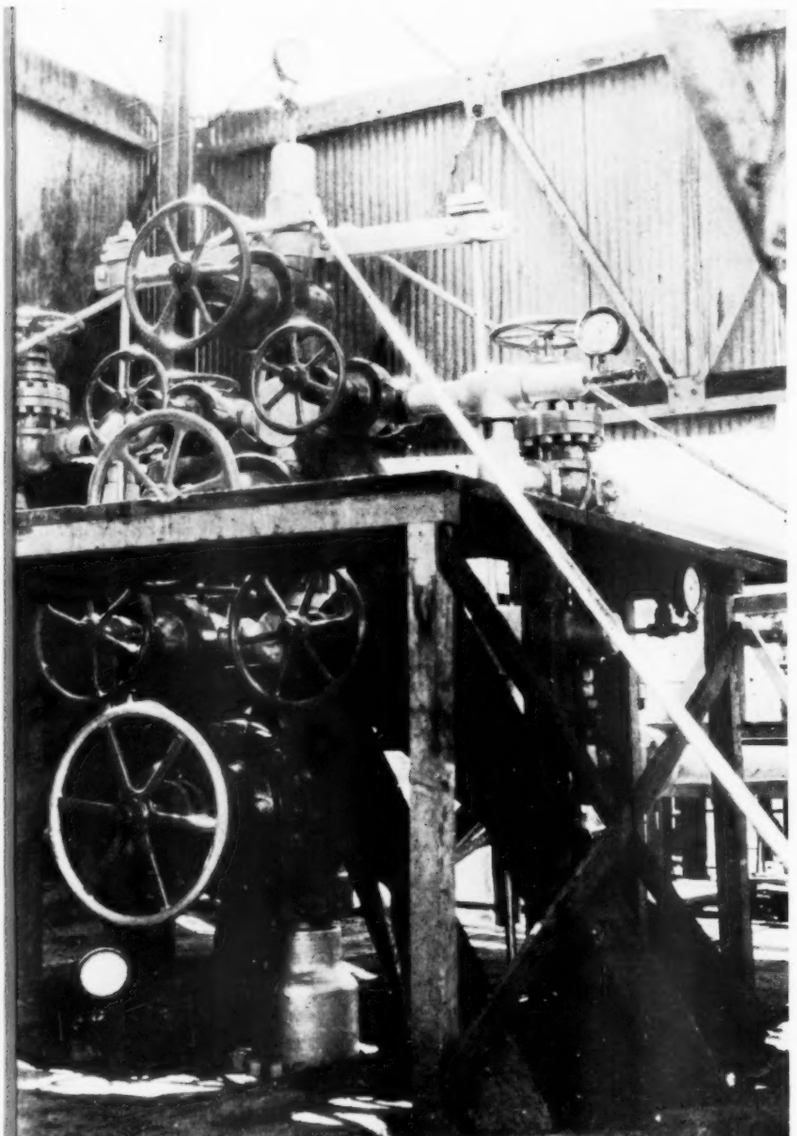
Costs Are High

One phase of drilling to 8000 feet at Kettleman Hills costs more than the entire expense of drilling wells of a few years ago. The cost of the casing alone greatly exceeds the total cost of average completions of 15 years ago. The labor item in the drilling of several wells has also exceeded the average cost of shallower producers of a generation ago. Since the field is producing from a level below the maximum depths of a few years ago, it is evident that the producing zone is reached only through the use of improved equipment and ideas.

Operating conditions are unusual in that drilling is featured by very tough, abrasive formations, especially below 5000 feet, a deep producing sand, high gas pressures below the top of the Temblor sand and the nature of production upon completion of the wells.

The equipment is naturally varied and complete, the principal drilling items including a 122-foot steel derrick with 26-foot base; from three to five high-pressure boilers if steam is used; 11 by 11 horizontal twin engine, or the latest three cylinder vertical engine, four-speed chain driven, or six-speed gear driven draw works; 24-inch and 27½-inch chain driven, and 20-inch shaft driven rotary machines; and two, 14 by 7¼ by 14 slush pumps. In addition to the ordinary steam layouts, the Hydril electric or steam and the Hild electric drive have been used with good success. Both steam and electric driven slush pumps are being used with equal success, with one at each well operating up to 1800 pounds on the fluid end and the other up to 3000 pounds. It is a common practice to manifold this combination to meet pressures in excess of 2200 pounds.

By starting a 24-inch hole, the conductor pipe is landed with a minimum effort. On top of the structure, mixed sands are cut between the surface and 4400 feet. Between 4400 feet and 4750 feet, a cavey shale is found, while shales also predominate in several wells between 4740 feet and about 5050 feet, the depth at which the brown shale is found. The brown shale ranges up to 1300 feet thick and is extremely hard to drill. It is a flinty, abrasive formation and while the more recent wells have drilled through it at a fair rate, the first tests found it extremely difficult to make progress, spending most of the time in going in and coming out of the hole for a change of bits. Minimum depth of the Temblor, or producing, zone is 6250 feet. One producing well found the top of this sand at about 7055 feet but the location is on the flank of the structure. Drilling in the producing zone is also very slow, due to its



Hook-up of Associated Oil Company's Whepley 1 at Kettleman Hills

abrasive nature and the high gas pressure. This formation is composed of sands and dark shales, the sand streaks being closely cemented, whether fine or coarse grained.

The danger from blowouts has led to a close study of rotary mud and circulating methods. Mud weighing more than 100 pounds per square foot has been used while drilling through the Temblor zone. Various conditioning materials have been used to good advantage. Vibrating screens to remove the sand and shales from the circulated mud have also been approved by several operators.

As an additional safeguard, every precaution is taken to provide surface equipment which will prevent blowouts. Past experience has been an expensive teacher, one well having blown out when the pressure reached 2350 pounds.

The casing program at Kettleman Hills is very interesting, even if very expensive. Full A. P. I. specification casing is used, the grade containing the highest tensile strength yet developed having been adopted. It is all a special alloy product and has been largely responsible for the records set. Various casing programs have been carried out but the number of strings and sizes have varied but little. An early completion included 1200 feet of 18⅝-inch, 5000 feet of 11¾-inch, and 6200 feet of 8⅝-inch. The third well completed used 1000 feet of 20-inch, 4500 feet of 13⅜-inch, 6200 feet of nine-inch and 7200 feet of 6⅝-inch as oil string. Another well has 20-inch at 1500 feet, 13⅜-inch at 5000 feet, 9⅝-inch at 6210 feet and 6⅝-inch oil string at 7225 feet. The first completions were finished without oil strings and performed perfectly in the abrasive Temblor with several hundred feet of open hole.

Tubing Cost Excessive

The cost of casing for a single well runs up to $80,000, but the average completion will not require such a total. Where full oil strings and tubing are run, the cost is greatest. The first 200 wells probably will require casing and tubing valued at $14,000,000.

Coring plays an important part in drilling at Kettleman Hills. Every foot of certain formations in the first wells was cored, although the tough sands reduced the speed of drilling. Coring is started well above the major formations, particularly those on which casing is to be landed. The brown shale at about 5000 feet and the Temblor at from 6000 feet to 7100 feet are determined by coring and at least one well known marker has been an aid in landing casing.

The cementing is done with comparative ease, due to improved technique and knowledge of conditions to meet. The 18⅝ and 20-inch surface strings are cemented to eliminate the shallow formations which cause a loss in circulation. As an extra precaution, the space outside the conductor string is filled with cement which is pumped in through tubing. It has become the common practice to land the 13 3/8 inch string well in the top of the hard brown shale to remove possibility of deeper water from working up into the brittle shale above 5000 feet. From 1500 to 2500 sacks of cement are used on the second string. The final water string is landed above the Temblor at various depths between 6000 feet and 7100 feet, depending upon the location of the well. The most recent completion had a string of 9⅝ inch casing at 7055 feet. When an oil string is run, it is set as deeply in the producing zone as possible and cemented through perforations at some point below the bottom of the last water string to force the well pressure into the inside string. Two cementing outfits are sometimes used in landing the string of 13 3/8 inch casing, this compounding forces the huge amount of cement into place in less than three hours after mixing has started.

A study of a few producing wells gives a much better idea of production problems than a general description which would not be applicable to any combination of wells. Actual completion and production practices are unlike those in any other California field, and are naturally most interesting.

Superior Oil Company's Huffman 1, completed with an

initial production of 11,000 barrels, was finished last but it proved to be the most interesting producer ever brought in in California. Starting with a flow of about 10,000 barrels, this remarkable well increased its yield to 15,000 barrels under ideal circumstances. The oil was about 40 gravity, or much heavier than that produced from earlier completions.

Huffman 1 was spudded in on December 3, 1929, and completed on September 4, 1930. It was completed at 8323 feet and was one of the deepest producers in the field. Located on the northwest flank of the field and regarded as a doubtful well, the spectacular action of the new producer placed a new valuation on the outside leases and indicated that the heavier oil will be produced from a greater depth than those from which the first producers are flowing.

The casing record of Huffman 1 demonstrates the value of improved equipment and drilling technique. A string of 18⅝ inch, 87.5 pound of conductor casing was cemented at 1500 feet; 13 3/8 inch, 68-pound at 5895 feet; 9⅝ inch, 47.2 pound at 7055 feet, and a seven-inch, 30-pound oil string on bottom.

The running of the oil string and combination liner was one of the outstanding developments of the year in casing circles. A combination liner, which was in reality three separate combination liners, was run. These combinations were run, one on top of the other, and connected with slip joints. From the bottom of the hole upward, the seven-inch oil string included 181.4 feet of perforated, 72 feet of blank, 206.1 of perforated, 76.1 feet of blank, 415 feet of perforated and blank on to the top. The casing and liner arrangement has elicited wide and favorable comment.

Gas-Oil Ratio Satisfactory

The well was brought in with 5000- and 6000-pound fittings and has caused no trouble. The gas-oil ratio is much more satisfactory than in previous completions, running less than 5000 cubic feet of gas per barrel of oil, as against 10 times as much gas per barrel of oil in a few of the earlier completions.

Milham Exploration Company's Elliott 1, the discovery well, blew wild for 20 days, having been brought under complete control on October 26, 1928. It was originally drilled to 7236 feet, but blew out at 7108 feet during re-drilling. Initial production was 4800 barrels of 60.4 gravity oil and upward of 100,000,000 cubic feet of gas. The well has produced for more than two years with 5000 feet of drill pipe in the hole. A 24-inch hole was started and the casing included 2000 feet of 15½-inch conductor pipe 4000 feet of 11-inch, and 6317 feet of 6¼-inch. The well is producing from 800 feet of open hole.

Elliott 1 has produced without interruption for more than 26 months, having yielded more than 2,160,000 barrels of oil valued at more than $3,500,000. The oil has brought a straight price of $1.65 per barrel. Sales of natural gas have brought the total revenue for the well to a much higher figure.

Continental Oil Company's Elliott 12-8 blew out late in 1929 from 6876 feet, following failure of fittings at about 2350 pounds. A study of the Christmas tree, flow line assembly and surface equipment used at this well reveals the layout necessary in producing a typical Kettleman Hills well. From the 8⅝ inch gate valve on top of the casing to the small connections on top of the Christmas tree, the fittings were tested at pressures up to 5000 pounds. The large bottom gate valve, which practically supports the Christmas tree assembly, is perhaps the only connection that would allow the well to blow out in case of breakage. The well is equipped to permit changes and repairs on all flow connections. Eight flow or lead lines are used, each series of four being connected to separate six-inch flow lines. Only one series is used to produce the wel lat any time.

The gas trap arrangement at Elliott 12-8 gives a good idea of the care and equipment necessary in producing a large well at Kettleman Hills. A total of 13 traps handle the flow from the well, the combination including eight high pressure, four low pressure and one vacuum trap. The high pressure traps were designed to handle pressures up to 1000 pounds, with the low pressure traps operating at pressures up to 260 pounds. It is obvious that the vacuum trap is used to remove the gas remaining in the flow.

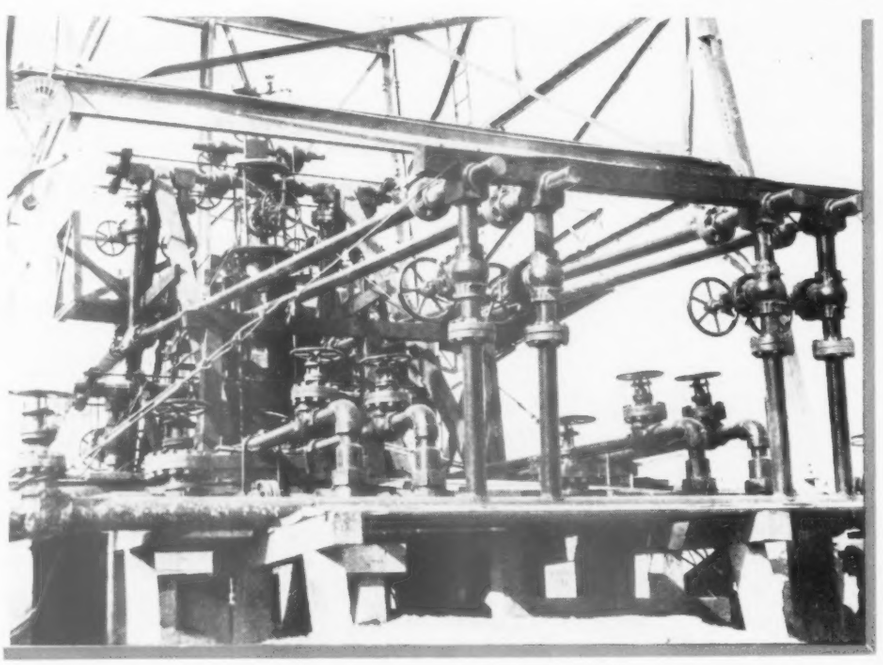
Special Fittings Required

Special fittings which are designed to withstand pressures up to 6000 pounds have been designed by two or three valve manufacturers, one producing well having been equipped with these fittings. This field has been responsible for several new types of fittings.

Each producing well is equipped with several flow beans and these devices have demonstrated their value under most adverse circumstances. They have proved vastly superior to the old steel nipple type of opening.

The cost of surface equipment incidental to completion and producing the average well at Kettleman Hills exceeds the total cost of drilling the shallow producer of 15 years ago. The Christmas tree assembly alone on one well cost in excess of $10,000, with other surface equipment being valued at about the same figure.

The action of oil and gas in the reservoir at Kettleman



Christmas tree and flow assembly of Continental Oil Company's Elliott 12-8

Hills has led to at least two distinct theories as to the probable effect of the first few years of operation of the original group of wells. One theory indicates that the decline of well production is chiefly due to reduction of the hydrostatic head which furnishes the main expulsive force and that water will immediately replace the space once occupied by the oil and gas. Another theory contends that friction in the reservoir will not allow water to fill the spaces as fast as the oil and gas is produced and drainage will be confined more to local sectors. It is further claimed that a few wells will not adequately drain the North Dome.

About 13,000 acres have proven productive on the North Dome—at least developments to date indicate such a total. Without regard to recent purchases which brought about the entry of two or three companies in the field, the principal acreage on the North Dome is divided as follows:

Company	Estimated Proven Acreage Percentage
Standard Oil Company	51.0
Continental Oil Company	13.7
General Petroleum Corporation	13.0
Milham Exploration Company	9.2
Pacific Western Oil Company	5.0
Shell Oil Company	2.1
George F. Getty, Inc.	2.0
Associated Oil Company	1.5
Superior Oil Company	1.0
Petroleum Securities Company	.9
Amerada Oil Company	.6
	100.0

Standard Controls Half

Standard Oil Company, through outright ownership of every other section across the North Dome, controls slightly more than one-half of the productive acreage. All of this land is held in fee but the company has not elected to push development ahead of market needs. The United States government, through the medium of permits, controls upwards of 40 per cent of the productive acreage on the North Dome. Recent entries into the field include Union Oil Company and Richfield Oil Company. The field (North Dome) is about 12 miles long and nearly two miles wide, but the boundaries do not necessarily follow uniform limits.

A full outlet for Kettleman Hills oil has been assured by completion of two pipe lines to the Pacific ocean and smaller lines which connect to trunk lines. Standard Oil Company completed a 10-inch line between the field and Estero Bay, a distance of 70 miles. Union Oil Company recently completed a 6-inch, 81-mile line between the field and tidewater which may be used for gasoline or oil. General Petroleum Corporation and Associated Oil Company have trunk pipe lines nearby.

Eight wells have been placed on production and all are still flowing at reduced rates. A record of completions follows:

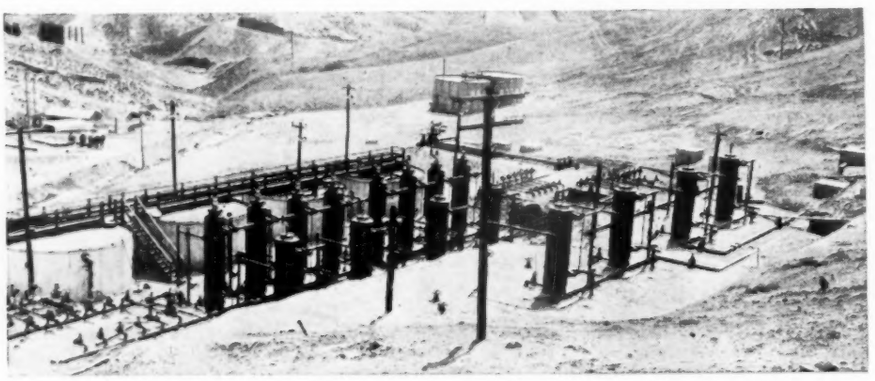
Company and Well—	Completed	Bbls. of Oil	Cubic Feet of Gas	Depth
Associated Oil Company, Whepley 1	8-16-30	3,000	75,000,000	7904
Continental Oil Company, Elliott 8	9-21-29	7,000	175,000,000	6876
Milham Exploration Company, Elliett 1	10-26-28	4,800	100,000,000	7236
Petroleum Securities Company, Felix 1	2- 7-30	1,500	40,000,000	7276
Standard Oil Company, No. 35-38	4-19-30	2,100	52,000,000	7392
Standard Oil Company, No. 1P-8	12-30-29	4,000	101,000,000	7108
Standard Oil Company, No. 11P-81	4- 5-30	3,000	100,000,000	7035
Superior Oil Company, Huffman 1	9- 4-30	14,000	56,000,000	8323

Twenty-four wells have been drilled to the Temblor zone and shut down after running water shutoff strings. Most of these wells could be placed on production on very short notice and all were shut down under provisions of the curtailment agreement which expires July 1, 1931.

The average person is unable to conceive the great capacity of the field as a gas reservoir. Discovery of oil and gas here will result in a change in the pipe line map of California. Operators searched for a generation for a permanent supply of natural gas, but in Kettleman Hills have even more than expected. Norman A. Rousselot, geologist for Mexican Seaboard Oil Company, has estimated that Kettleman Hills contains enough natural gas to supply all of California for more than 100 years, and enough to supply the cities of Los Angeles and San Francisco for 650 years. The field is located roughly midway between the San Francisco bay district and Los Angeles basin cities and stands as a permanent gas reservoir to supply both districts. The daily gas waste in the field has exceeded 4000,000,000 cubic feet for considerable periods, despite two large pipe lines to San Francisco and several smaller lines.

The two-unit plan of operation, which is a long story within itself, will be applied to the field if the various operating companies can reach an agreement. Otherwise the field will be developed and California's gasoline needs will be met with a comparatively small amount of very light oil. One barrel of Kettleman Hills oil is equivalent to three barrels of ordinary oil and to five barrels of heavy crude, such as is produced in many California fields.

Rapid development of the field would lead to almost unprecedented sales of equipment of all kinds, but there is a question whether the artificial prosperity created by the drilling of several hundred wells could offset the effects of a large production of very light oil.



One of Standard Oil Company's gas trap installations for a single well

MISSION SLIPS

ARE DESIGNED TO HANDLE LONG STRINGS OF PIPE

Without Damaging

Mission Slips have been designed with a definite purpose in mind—to produce slips that would handle long strings of pipe without damaging and thus save many times their cost in pipe saved. Laboratory and field tests have conclusively proven the attaining of this objective. Use by major oil companies the world over has been principally because of the economies in saving pipe from damage and ease of handling.

TOOK THE LIMIT OF TESTING MACHINE— 200,000 POUNDS

PIPE REMOVED FROM SLIPS BY HAND

In a recent test at Rice Institute, Mission Slips were subjected to the capacity of the Tinius Olsen Tension-Compression Testing Machine. How much greater load the Mission Slips would take, we do not know, since 200,000 pounds is the limit for this particular testing machine.

This 200,000 pounds pressure is equivalent to . . . . 13,333 feet of 13.3 lb. 3 inch drill stem with 44 lb. A.P.I. tool joints on every joint . . . figured on the weight of the pipe hanging in the air.

At the conclusion of the test the pipe was removed from the slips by hand. No other slip tested by this machine has ever permitted such ease in removal of pipe. Such results reflect the perfection of engineering design and balance of the Mission Slips and explain why much pipe is saved due to that quality in design which allows these slips to handle long strings of pipe without damaging same.

Investigate Now the money making advantages of using Mission Slips that pay for themselves over and over on the pipe they save. Write for complete NEW CATALOG containing prices and types of Mission Slips.

Distributed by

Republic Supply Company

OIL AND GAS WELL SUPPLIES

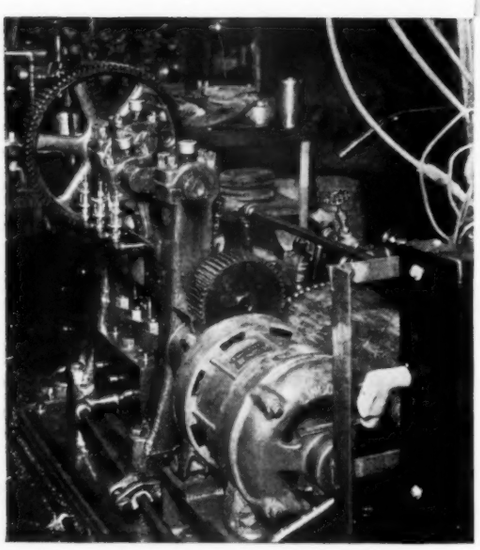
Cable and Rotary Tools

GENERAL OFFICES: HOUSTON, TEXAS

"IT'S just too bad that the particular conditions in our plant are such that moisture and dirt eat the inners out of our motors and make them short lived.

But I suppose those conditions represent a necessary evil."

TRADITION



Lincoln "Linc-Weld" motorized Worthington compressor.

"Very true words — we can't change the conditions for the better.

But we CAN change the motors for the better.

PROGRESS

It's just a case of selecting a motor whose insulation is impervious to such conditions.

And it so happens, Pop, that Lincoln makes that motor—the 'Linc-Weld'.

Its superior insulation is impervious to corrosive gases and moisture, and remains permanently plastic and pliable.

So why shouldn't we use that protection since dirt is bound to get into a motor just as it does in children's ears —especially when parents are careless with their talk."

THE LINCOLN ELECTRIC COMPANY

Department No. 33-1 Cleveland, Ohio

M-81

LINCOLN

"LINC-WELD" MOTORS

Drilling in wildcat territory in Venezuela

WORLD PETROLEUM IN REVIEW

Well Increases Initial Production Maracaibo, Venezuela. — Colon Development Company's CM-4 in Los Manueles field which came in for an initial production of 2400 barrels several weeks ago has increased in flow to 4320 barrels per day. This well, considered the second largest in the area, will probably rank as the largest producer in Colon Development Company's producing territory.

Production of this subsidiary of Colon Oil Corporation during the week ended December 26, was 118,138 barrels.

October Crude Production Down Mexico City, Mexico. — The decline in crude production begun in August has continued through October for the Tuxpan and Panuco fields without a total output for these two fields of 2,468,578 barrels, a daily average of 79,599 barrels. This production shows a decrease of 79,747 barrels from the September total of 2,547,325 barrels, a daily average of 84,911 barrels.

Pan American Petroleum & Transport Company was the largest producer for the month with a total of 21,790 barrels while Royal Dutch Shell (including Mexican Eagle) was the second largest producer with 10,294 barrels.

Crude Production In Poland Warsaw, Poland.—Estimates of the crude output for the third quarter of 1930 show a total production of 1,270,500 barrels or an average monthly production of practically 424,000 barrels.

Losses suffered from the drastic change in market conditions has held production down to the equivalent of domestic consumption. Any attempts to export the crude have resulted in sharp losses for the producers and have discouraged excessive drilling operations and over-production during the period.

Hodonin Field Furnishes Producer Praha, Czechoslovakia.—The new well of Apollo Oil Company of Bratislavia recently completed in the Hodonin field of Moravia has an estimated flow of 2000 barrels of crude oil daily. Other wells in this district have been flowing from 180 to 200 barrels daily. Maintenance of this initial production by the well will supply an approximated one-third of the Czechoslovak consumption of crude oil.

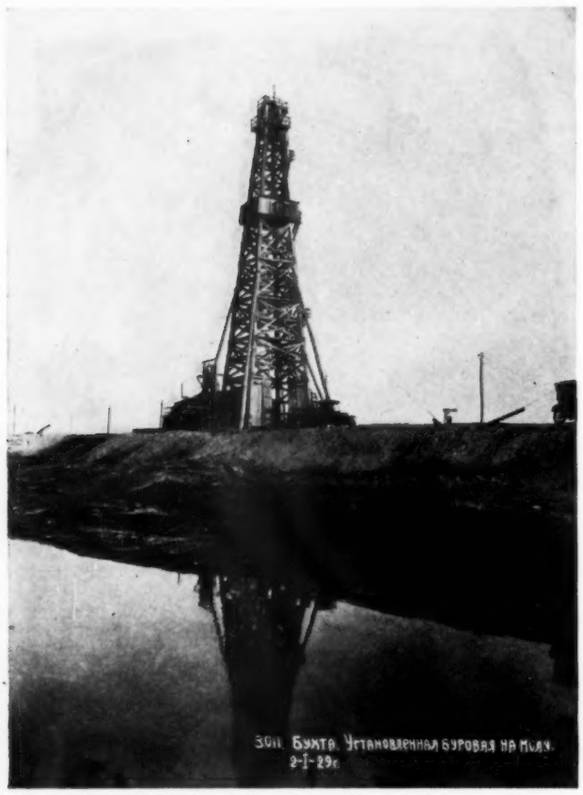
October Shows Production Increase Edmonton, Canada.—Efforts to supply the demand for petroleum in this country has resulted in large increases for the last two months. Official figures for October show an estimated total of 159,860 barrels compared with 129,007 barrels for September, an increase of 30,853 barrels. Consumption is still greater than the production and has necessitated the buying of crude from Wyoming and Montana in order to keep refineries running to capacity. Turner Valley field has accounted for the major part of the total monthly production.

Acquisition of extensive acreage in Ontario has recently been announced by United Gas & Fuel Company of Hamilton (Ltd.). Several producing gas wells are included in this area and more wells will be drilled in the near future. Output of the wells will be used to supply Hamilton with natural gas.

Mexican Crude Production Mexico City, Mexico.—Production of crude oil for the first eight months of 1930 amounted to 27,322,892 barrels, a reduction of 1,623,815 barrels for the corresponding period of 1929.

Operations for the various fields included 61 wells brought in for production with a total initial production of 52,320 barrels daily. Completions in the Paso Real area recently definitely extended the producing territory. The completions registered for the eight months period were divided between: Ebano, with eight wells, which produced an initial flow of 7441 barrels; Panuco, 10 wells for 1786 barrels; Panuco (various), with four wells for 1780 barrels; Tanguijo, one well with six barrels initial production; Chapopote, one gas well; Paso Real, 12 wells for a total of 24,990 barrels; San Isidro, two wells, 705 barrels; Miahuapan, one gas well; Poza Rica, one well with 32 barrels initial and Tonala with 21 wells for a total of 15,580 barrels.

New Plymouth Well Promising Wellington, New Zealand.—Blenheim Reclamation Company's No. 2 is approaching the 2170-foot depth at which it expects to encounter rich oil sands. Casing has been set and cemented preparatory to entering the sand. The No. 1 of the same company proved to be a good producer when brought in during February of last year. The well was originally drilled in 1913 and produced 50 barrels of oil at 2200 feet. It was later drilled to a depth of over 5700 feet but was finally abandoned. Blenheim Reclamation Com-



Scene in Bibi Eibat field, Baku district, where a portion of the Caspian Sea has been filled in to permit drilling.

pany took over the well in 1927 and plugged back to the 2200-foot level which produced some oil but a blow-out wrecked the hole and it was decided to be more economical to drill a new test in preference to reclaiming the old hole. Oil will probably be struck in the No. 2 at the depth from which the original well was producing. The new test is located approximately 100 feet east of the first test.

Pipe Line Controversy Settled

Paris, France.—Negotiations and discussions of the oil pipe line problem which has occupied a prominent place in relations between England and this country for the past few years is apparently settled, for the time at least. The selection of the pipe line terminus was the question between the British and French interests, Tripoli and Haifa both having been suggested as favorable ports for handling the crude production from the Mosul fields.

The contention of the French interests was that the distance to Tripoli was much less while the British interests, although admitting that the distance was much less to Haifa, showed where the control and protection of the pipe line would be aided by the new railroad which has been built along that route.

A compromise resulting from the London conference has led to the decision that two terminals will be built, necessitating the building of two branches of the line after it approaches the Mediterranean Sea. The pipe line and its branches will be built by a special company financed by the members of the Iraq Petroleum Company, each party financing the program in proportions to their respective holdings in the company. While the double terminal feature will prove more costly than the single terminal it is considered that the compromise agreement will be more satisfactory to both interests than if the question had been settled in favor of one party.

Lakes Entrance Operations

Sydney, Australia.—Reports submitted by the state engineer show that nine wells are now being drilled at Lakes Entrance. South Australian Oil Wells Company's No. 4 is being pumped and is producing about six barrels of oil daily. About 150 barrels has been stored.

Roumania Supplies Oil for Spain

Madrid, Spain.—Advices received recently are to the effect that a contract has been signed between Compania Espanola de Petroleras of Madrid and the Pallas S. A., the Roumanian company of Bucharest to supply the Spanish market with 2,000,000 barrels of petroleum products annually. Deliveries for the year will include 1,275,000 barrels of gasoline, 38,750 barrels of kerosene, 666,000 barrels of fuel oil and 253,750 barrels of gas oil. These products are to be sold to this company at 13 per cent below the Gulf of Mexico port quotations.

Russia has heretofore supplied the majority of petroleum products to this country with approximately 52 per cent of the imports of petroleum while Roumania has supplied only four per cent of the imports. With the signing of this contract the imports from Roumania for next year will total 57 per cent of the total imports for Spain.

Columbia Oil Bill More Favorable

Bogota, Colombia.—The petroleum bill now before the congress of Colombia, in its general terms, is an improvement over previous and existing oil legislation, according to an official of one of the large American oil companies operating in this country. He characterized it as being as good as Law 120 of 1919 and much better than the Montalvo law of 1928-1929.

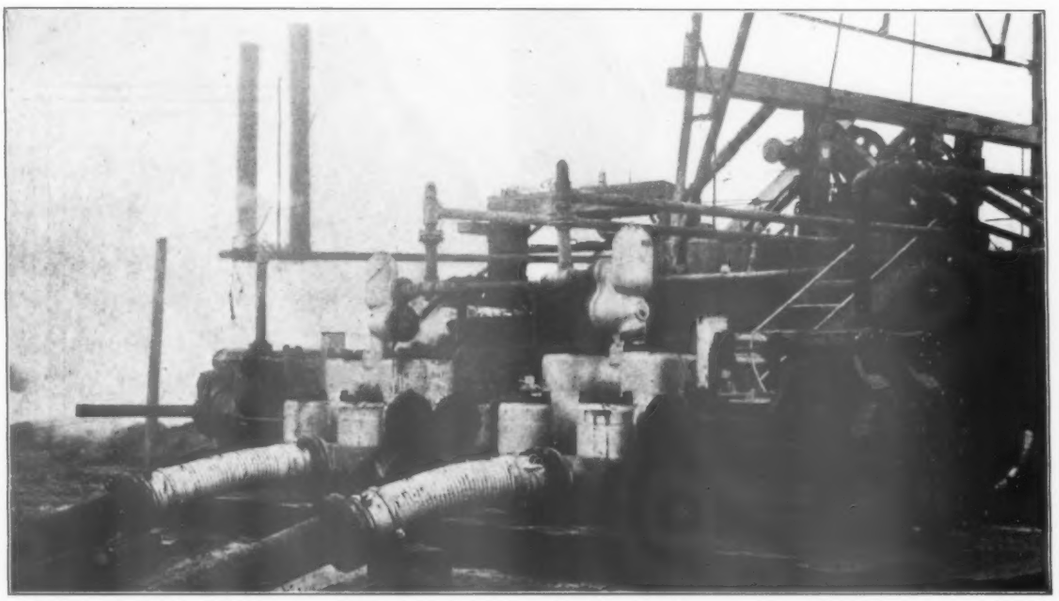
If certain modifications are effected, the gaining of which is uncertain, the pending law may become a satisfactory instrument and possibly warrant a resumption of oil operations in this country. The bill, it is thought, will be acted upon by the Colombian congress the latter part of February, 1931.

Oil Activities At Tampico

Mexico City, Mexico.—Further restriction of oil activities at Tampico is seen in the importation of 12,750,000 liters of gasoline from Venezuela by Huasteca Petroleum Company, subsidiary of Mexican Petroleum Company, owned by Pan American Petroleum and Transport Company. Duty on this gasoline amounts to 602,000 pesos. The purchasing company has a refinery at Tampico.

Harry Winger, drilling foreman, and C. A. Moon, field superintendent, standing before Baba Gurgur 1, discovery well of Northern Iraq

A Good Pump Made Better!



Wilson-Snyder New SIDE SUCTION No. 18 Is the Acme of Pump Performance *because!*

10" SIDE SUCTION

On both sides give direct flow from pit to pump. No ells or sharp turns. Pump fills quicker and with more rapid distribution of fluid to valves.

3000 POUND TEST

Fluid ends, are tested to this high pressure to assure safe handlings of extra high steam pressures.

FLEXIBLE COUPLINGS

Eliminate all vibration and thus reduces wear and tear on pump. These couplings absorb all jarring shocks and strain which are the cause of much pump trouble.

NEW VALVES

The above photo shows two W-S Side Suction Pumps on Ben Coyle's rig at Refugio. Ben Coyle, one of the oldest and best known drillers in the Gulf Coast Fields, has always been a big booster for W-S Pumps. The superior service of the new Side-Suction Pump has surpassed even this "old timers" idea of excellent performance.

Wilson
SUPPLY COMPANY
Oil & Gas Well SUPPLIES

BRANCH STORES
Luling, Beaumont, Pettus,
Barbers Hill, Texas
Shreveport, La.

1412 MAURY ST.
HOUSTON, TEXAS

THE

LOW DOWN

ON AN APPLEMAN GUMBO BIT

Its water course, which leads directly to the cutting edge, not only provides a greater cooling effect, but causes the cuttings to be broken up and quickly dissolved in the passing fluid. This eliminates the long dreaded hazard of choking up and its many subsequent expenses.

Too, the concave design . . . and hard facing . . . permits a constant cutting edge for both bottom and sides; the wear, on the back only, retains this sharpness. Clean, even walls where APPLEMAN BITS have been used make reaming a rare necessity.

APPLEMAN BITS save time, worry, money!

Write for Complete Information.

B.K. APPLEMAN

BEAUMONT, TEXAS

Markets--Production--Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

Production Last Week Less Than Refinery Consumption

Crude production in the United States for the week ending January 10 was something over 400,000 barrels less than consumption by refineries during the same period, according to estimates compiled by the American Petroleum Institute. At the same time the Institute reports that stocks of gasoline had been reduced nearly 200,000 barrels, dropping from 39,780,000 barrels on January 3 to 39,583,000 barrels on January 10. This indicated lowering of both crude and refined stocks reflects continued success of proration of crude production and adherence to the program under which the refiners propose to enter this year's big consuming season with gasoline stocks at 40,000,000 barrels.

With this indication that the industry's situation as a whole is "as well as could be expected," trouble remains localized in the stripper well sections of Oklahoma and Kansas. And here a solution of the situation is apparent, following intervention and suggestion from the several industry organizations concerned, state and national governmental authorities and purchasers of oil in the areas. Concern over the prospects of "closing in and ruining through water intrusion" of the stripper wells heretofore having market through the agency of Prairie Oil & Gas Company which withdrew as a purchaser in those areas on January 1, resulted in conferences being held in New York by the board of the American Petroleum Institute and in Washington where administration officials are said to have applied the persuasion of a threat of reversal of tariff policy unless the larger companies in position to take the oil (some of whom are importers) take some steps to relieve the situation of the small producers. Meanwhile a committee of representatives of the several oil producing states, appointed by their respective governors at the instance of the governors of Oklahoma and Kansas, are enroute to Washington to convene on January 15. Just what will follow this conference cannot be forecast, except that it is certain that a demand will again be made for restriction of imports of oil. The demand for a tariff is assured by the fact that at least a majority of the committees appointed will be of that portion of the industry heretofore committed to the belief that imports are responsible for the plight of the industry. However, it is hardly probable that facts in this connection not heretofore presented can be brought out at this time, and the administration still is opposed to such a tariff, as was made plain by statements made by Secretary of the Interior Wilbur since the present situation arose. Conditions being such, the possibilities of the tariff remain moot.

Production Up Slightly

Production reacted slightly upward last week, influenced most by Oklahoma, where the increase was 8400 barrels, and Texas, up 5100 barrels. Arkansas and California also had slight increases, but continued recessions in other sections were sufficient that the net increase for the week was only 2800 barrels per day, which leaves the curve far below any point reached in many months, except for the preceeding week.

By coincidence, the production in Texas for the week ending January 10—656,250 barrels daily, balances with indicated requirements as compiled by the proration committee. Preliminary survey of crude nominations for the period January 4 to March 31, indicates that daily requirements for crude in Texas during this period will approximate 656,000 barrels. This represents a decline of 24,000 barrels from the former figure of 680,000 barrels. Final details of nominations are now in process of compilation at the office of David Donoghue, technical advisor to the central proration committee, and will be presented to the railroad commission prior to the hearing at Austin on January 22.

Prairie Withdrawal Muddle Appears Nearing Solution

Although last week brought relief to additional stripper wells of Oklahoma and Kansas, there still remains 14,500 barrels of this settled output to be given outlet before the whole matter is finally settled.

The Stanolind companies, subsidiaries of Standard Oil Company (Indiana) are soon to be taking 12,288 barrels of this settled production, while other purchasers are taking 15,000 barrels daily.

Standard Oil Company (Indiana) made a proposition to take 3000 barrels additional to be bought by Prairie Oil & Gas Company and transported by Prairie Pipe Line Company at full rates of the Prairie companies and delivered to the Wood River refining plant. W. S. Fitzpatrick, president of Prairie Oil & Gas Company, declined to accept this, unless other concerns would agree to take the remaining part of the 14,500 barrels remaining without a market.

Another proposal made by the committee of purchasers was that Prairie Oil & Gas Company begin running the 14,500 barrels of distress oil, under the condition that other purchasers buy a like amount of oil from the former's leases, which are near lines of these other purchasers. This was not accepted.

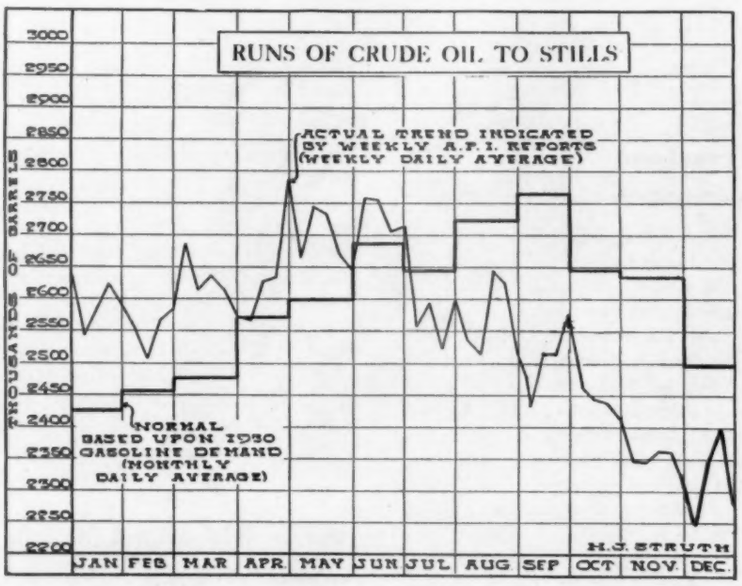
A committee of producers, E. B. Lawson of Tulsa, J. Wood Glass of Nowata, H. G. Ellis of Bartlesville and J. B. Milam of Chelsea, asked that Prairie Pipe Line Company sell its gathering lines in the areas still without relief, so that producers could offer the oil to other trunk lines.

In declining to sell part of its gathering system, Prairie Pipe Line Company made it clear that it could not relinquish parts of its system, which still serve leases of Prairie Oil & Gas Company.

This committee of producers has provided outlet for 1500 barrels daily from 3500 wells in the Alluse field by agreeing to furnish pipe for providing a gathering system, which will connect with the existing lines of Stanolind Pipe Line Company.

While these proposals and counter proposals have been going back and forth between purchasing companies, the committee of purchasers has kept busy with other plans. While it is too much to predict, indications are that the

MARKET SECTION



result of the withdrawal of Prairie Oil & Gas Company as a purchaser January 1 will finally result in all this settled production being cared for by other purchasers.

Oklahoma Proration Opponents Making Appeal to the Public

The plight of the settled areas of the Mid-Continent has drawn the greater part of the attention in oil circles for the past two weeks but other developments have been of a nature to further weaken the proration program in both Oklahoma and Kansas.

At Oklahoma City, Saturday, January 10, the Independent Oil Operators of Oklahoma was formed, with E. B. Howard, former Oklahoma congressman as president. Advertising, which appeared in Oklahoma newspapers the following day, set up proration as the evil of present-day oil affairs. After showing how proration had reduced the income for the state and setting out production figures of other states, this advertised message said:

"This process of strangling Oklahoma independent producers, who have their property in Oklahoma and pay tax assessments in Oklahoma, is shifting to the shoulders of the farmers, home owners and other tax payers a heavier

CRUDE RUNS TO STILLS, GASOLINE STOCKS AND GAS AND FUEL OIL STOCKS, WEEK ENDING JANUARY 3, 1931

(Figures in barrels of 42 gallons)

District—	Potential Daily Capacity	Potential Capacity Reporting Total	Potential Capacity Reporting Per Cent	Crude Runs to Stills Total	Crude Runs to Stills Daily Average	Crude Runs to Stills Per Cent Operated	Gasoline Stocks	Gas & Fuel Oil Stocks
East Coast	612,700	612,700	100.0	3,093,000	441,900	72.1	5,868,000	9,601,000
Appalachian	141,300	132,500	93.8	549,000	78,400	59.2	1,051,000	1,050,000
Indiana, Illinois, Kentucky	390,800	381,000	97.5	1,661,000	237,300	62.3	4,542,000	3,462,000
Oklahoma, Kansas, Missouri	461,100	412,200	89.4	1,444,000	206,300	50.0	2,854,000	4,120,000
Texas	809,000	743,500	91.9	3,286,000	469,400	63.1	6,912,000	10,846,000
Louisiana-Arkansas	266,600	262,000	98.3	912,000	130,300	49.7	1,526,000	2,270,000
Rocky Mountain	150,100	139,700	93.1	235,000	33,600	24.1	1,689,000	1,002,000
California	898,500	887,600	98.8	3,487,000	498,100	56.1	15,338,000	103,873,000
Total Week January 3	3,730,100	3,571,200	95.7	14,667,000	2,095,300	58.7	39,780,000	136,224,000
Total Week December 27	3,730,100	3,571,200	95.7	15,452,000	2,207,400	61.8	39,388,000	136,917,000
The total U. S. figures for last year, shown immediately below, are not comparable with this week's totals because of difference in percentage capacity reporting.								
Total January 4, 1930	3,650,900	3,481,200	95.4	17,278,000	2,468,300	70.9	42,217,000	144,017,000
The Texas and Louisiana Gulf Coastal Figures Shown Below are Included above in the Totals of Their Respective Districts.								
Texas Gulf Coast	529,500	529,500	100.0	2,517,000	359,600	67.9	5,519,000	8,133,000
Louisiana Gulf	147,500	147,500	100.0	694,000	99,100	67.2	1,290,000	1,351,000

MARKET SECTION

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

	Allowable Production	Actual Daily Average Week Ending Jan. 10, 1931	Excess
Arkansas	59,518	51,050	—8,468
California	500,000	538,500	38,500
Kansas	105,554	105,750	196
Louisiana	57,704	70,050	12,346
Oklahoma	465,000	457,300	—7,700
Texas	680,238	656,250	—23,988
Balance of U. S.	230,000	206,000	—24,000
Total	2,098,014	2,084,900	—13,114

load to carry, because someone must meet the state government obligations."

Another paragraph gave this estimate of proration:

"Oil proration has caused thousands of men to be thrown out of steady employment, thus reducing many of them and their families to dire want and penury. Oil proration has been an economic failure in Oklahoma. It has not benefitted Oklahoma, its schools and its roads. It has worked disastrously for Oklahoma independent oil operators. It has made many jobless."

In Kansas Sinclair Oil & Gas Company notified proration officials that it would increase its takings of its own oil in the Voshell pool to 5000 barrels daily because of needs at the Argentine (Kansas City) refining plants of Sinclair Refining Company. This amount is about 38 per cent of the potential output of these leases as of October 1, 1930. Such runs will be in excess of proration ratios of the pool. Officials of the company have explained that the increase in runs from their own Voshell leases is temporary and will not for the whole month amount to more than the amount allowed under the proration.

Association Favors Proration

Mid-Continent Oil & Gas Association, however, gave its further approval to proration through a resolution upholding the conservation statutes of Oklahoma. The resolution read:

"Resolved that the board of directors of Mid-Continent Oil & Gas Association hereby endorses the Oklahoma conservation law of 1915 and the principle proration and that we are opposed to any repeal or emasculation of the law that would leave the State of Oklahoma powerless to prevent waste of its irreplaceable natural resources or to protect the co-equal rights of oil producers in pools where the potential production exceeds the transportation or marketing facilities or reasonable market demand of the pool as a whole. Proration, when fairly administered in accordance with the provisions of said law, is the only means now known to the industry which can be availed of to protect the non-integrated producer against discrimination and drainage and thus to prevent waste.

"This association has openly supported the conservation law and believes that the repeal of the law or abandonment

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

(Barrels of 42 gallons)

	Total Month Dec.	Total Month Nov.	Week Ended Jan. 3	Week Ended Dec. 27
At Atlantic Coast Ports—				
Baltimore	664,000	"A" 1,254,000	428,000	203,000
Boston	435,000	1,077,000	.....	193,000
New York	3,806,000	3,739,000	965,000	1,071,000
Philadelphia	1,018,000	1,094,000	227,000	178,000
Others	1,047,000	740,000	153,000	"A" 214,000
Total	6,970,000	7,904,000	1,773,000	1,859,000
Daily Average	224,839	263,467	253,286	265,571
At Gulf Coast Ports—				
Galveston District	195,000	74,000	65,000	64,000
New Orleans and Baton Rouge	329,000	221,000	.....	66,000
Port Arthur and Sabine District	65,000	.....	.....	.....
Tampa	9,000	53,000	.....	.....
Total	598,000	348,000	65,000	130,000
Daily Average	19,290	11,600	9,285	18,571
At all United States Ports—				
Total	7,568,000	8,252,000	1,838,000	1,989,000
Daily Average	244,129	275,067	262,571	284,142
Distribution of Total Imports Is As Follows:				
Crude	4,406,000	"A" 4,762,000	1,189,000	1,060,000
Gasoline	729,000	1,124,000	142,000	114,000
Kerosene	36,000	.....	.....	.....
Gas Oil	151,000	93,000	19,000	.....
Fuel Oil	2,246,000	2,273,000	488,000	"A" 815,000
Total	7,568,000	8,252,000	1,838,000	1,989,000

"A"—Revised.

RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF COAST PORTS

(Barrels of 42 gallons)

	Total Month Dec.	Total Month Nov.	Week Ended Jan. 3	Week Ended Dec. 27
At Atlantic Coast Ports—				
Baltimore	171,000	251,000	51,000	.....
Boston	134,000	187,000	.....	37,000
New York	950,000	1,014,000	475,000	178,000
Philadelphia	300,000	532,000	.....	.....
Others	111,000	138,000	.....	34,000
Total	1,666,000	2,122,000	526,000	249,000
Daily Average	53,742	70,733	75,143	35,571
At Gulf Coast Ports—				
Total	144,000	"A" 72,000	.....	.....
Daily Average	4,645	2,400	.....	.....
At Atlantic and Gulf Coast Ports—				
Total	1,810,000	2,194,000	526,000	249,000
Daily Average	58,387	73,133	75,143	35,571
Distribution of Total California Oil Receipts Is As Follows:				
Gasoline	1,197,000	"A" 1,762,000	388,000	64,000
Kerosene	80,000	.....	.....	62,000
Gas Oil	188,000	220,000	64,000	.....
Fuel Oil	334,000	209,000	74,000	112,000
Lubricants	11,000	3,000	.....	11,000
Total	1,810,000	2,194,000	526,000	249,000

"A"—Revised.

MARKET SECTION

United States Daily Average Production

1930	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
January	671,050	111,700	672,650	178,300	37,650	58,500	142,250	73,850	688,850	2,634,800	81,574,650
February	631,900	111,400	654,600	199,950	39,450	58,400	135,050	74,850	746,550	2,652,150	74,280,200
March	622,650	115,500	644,400	206,000	41,600	58,600	132,700	73,600	649,000	2,544,050	78,865,400
April	657,050	122,200	640,950	206,800	42,100	57,800	138,700	75,950	625,700	2,576,250	77,018,100
May	663,300	131,000	662,350	203,900	39,900	53,800	137,150	82,500	623,700	2,597,700	80,529,600
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
August	558,850	115,650	646,400	206,600	41,500	55,100	128,550	106,000	611,250	2,470,900	76,597,600
September	558,900	116,550	606,550	200,750	40,150	53,550	121,400	110,650	604,900	2,413,400	72,402,205
October	542,100	114,850	609,500	194,850	41,500	52,800	121,750	104,000	590,800	2,372,150	73,536,350
November	491,550	111,400	579,350	190,100	44,050	52,000	116,400	101,950	601,200	2,288,000	68,639,150
December*	460,600	105,600	534,950	189,250	43,050	51,250	111,600	100,300	590,850	2,187,450	67,811,550
January 3	448,900	108,300	494,300	186,250	41,750	49,750	113,300	102,050	537,500	2,082,100	14,574,700
January 10	457,300	105,750	499,400	185,750	41,150	51,050	111,450	94,550	538,500	2,084,900	14,594,300
Increase	8,400	.....	5,100	.....	.....	1,300	.....	.....	1,000	2,800	19,600
Decrease	.....	2,550	.....	500	600	.....	1,850	7,500	.....	.....	.....

*Estimated—Subject to Revision.

TEXAS
(Outside Gulf Coast)

PANHANDLE DISTRICT

	Jan. 10	Jan. 3
Carson County	4,000	3,850
Gray County	41,450	41,950
Hutchinson County	8,100	7,800
Wheeler County	300	300
Others	300	100
Total	54,150	54,000

NORTH TEXAS

Archer County	12,000	12,000
Burkburnett	6,400	6,400
Electra	8,700	8,700
Iowa Park-KMA	3,800	3,800
Montague and Cooke Counties	5,850	5,900
Wilbarger	13,350	13,400
North Young County	8,000	6,500
Others	1,600	1,600
Total	59,700	58,300

WEST CENTRAL TEXAS

Brown County	3,900	4,200
Callahan County	2,650	2,750
Coleman County	1,600	1,800
Eastland-Desdemona	4,000	4,000
Jack County	1,550	1,600
Palo Pinto County	400	400
Shackelford County	4,000	4,100
Stephens County	4,500	4,350
Throckmorton County	800	500
South Young County	2,150	2,300
Others	1,650	2,000
Total	27,200	28,000

WEST TEXAS

Crane-Upton Counties	28,350	30,150
Crockett County	1,850	1,900
Ector	7,400	6,900
Howard County	21,700	16,000
Jones County	1,400	1,200
Mitchell-Scurry Counties	2,000	2,000
Pecos County	3,700	3,750
Reagan County	23,500	21,550
Winkler County	52,550	54,900
Yates	89,400	91,200
Others	6,300	6,300
Total	238,150	235,850

EAST CENTRAL TEXAS

Boggy Creek	2,500	2,550
Corsicana-Powell	5,000	5,050
Currie	300	300
Joiner District	500	550
Mexia	3,800	3,800
Nigger Creek	200	200
Richland	150	150
Van Zandt	27,300	27,550
Wortham	600	650
Others	50	50
Total	40,400	40,850

SOUTHWEST TEXAS

Chapman-Abbott	5,300	5,400
Dale	250	250
Darst Creek	31,700	28,650
Laredo District	14,800	14,400
Luling	9,750	9,800
Lytton Springs	800	700
Salt Flat	15,250	16,200
Somerset	1,350	1,300
Others	600	600
Total	79,800	77,300
T'tl Tex. (outside Gulf Coast)	499,400	494,300

TEXAS GULF COAST

Barbers Hill	19,500	21,500
Batson	1,150	1,000
Big Creek	2,900	3,000
Blue Ridge	1,500	1,600
Boling	1,050	900
Damon Mound	550	650
Esperson	2,550	2,600
Fannett	500	550
Goose Creek	4,300	4,300
Hankamar	2,500	2,500
Hull	7,200	7,200
Humble	10,700	11,600
North Dayton	1,300	1,250
Orange	2,200	2,100
Orchard	2,050	1,850
Pettus	8,100	8,300
Pierce Junction	9,800	9,500
Port Neches	1,400	1,650
Raccoon Bend	8,600	8,350
Refugio	29,900	28,950
Saratoga	1,100	1,150
Somerville	1,500	1,150
Sour Lake	1,900	1,900
South Liberty	2,700	2,800
Spindle Top	13,000	13,050
Sugar Land	12,000	12,100
West Columbia	4,600	4,650
Others	2,300	2,250
Total	156,850	158,400
Texas Total	656,250	652,700

OKLAHOMA

Allen	12,750	12,950
Asher	800	800
Blackwell	2,250	2,150
Bowlegs	12,450	12,100
Braman	1,900	1,800
Bristow Slick	10,900	10,500
Burbank	13,700	13,700
Carr City	12,250	12,850
Cromwell	4,200	4,200
Cushing	11,750	11,550
Davenport	900	850
Duncan District	6,250	6,850
Earlsboro	17,250	17,000
East Earlsboro	16,600	15,400
East Little River	10,300	10,250
East Seminole	1,700	2,250
Fox	900	850
Garber	4,450	4,250
Graham	2,500	2,150
Healdton	9,300	9,100
Hewitt	5,200	5,150
Hubbard	800	700
Konowa	16,300	15,500
Little River	21,250	22,100
Logan County	3,150	3,150
Maud	2,500	2,600
Mission	5,100	4,650
North Okmulgee	8,000	7,950
Oklahoma City	94,800	86,550
Osage (outside Burbank)	22,500	22,500
Papoose	1,950	2,100
Pearson	550	550
St. Louis	19,350	20,550
Sasakwa	4,100	4,150
Scholem Alechem	11,400	10,600
Searight	5,500	5,350
Seminole	13,500	12,800
South Earlsboro	7,500	6,600
South Okmulgee	4,600	4,500
Thomas	400	400
Tonkawa	4,550	4,250
West Asher	8,000	7,350
Wewoka	4,500	4,400
Yale Jennings	5,350	5,300
Others	33,350	37,600
Total	457,300	448,900

CALIFORNIA

Dominguez	9,800	9,800
Elwood-Goleta	31,500	27,800
Huntington Beach	22,000	22,000
Inglewood	15,000	15,500
Kettleman Hills	22,500	22,600
Long Beach	92,300	93,300
Midway-Sunset	56,000	56,000
Playa Del Rey	37,700	38,000
Santa Fe Springs	72,800	74,500
Seal Beach	16,500	15,000
Ventura Avenue	44,400	45,000
Others	118,000	118,000
Total	538,500	537,500

KANSAS

Augusta-Fox Bush	3,200	3,150
Churchill	3,500	3,500
Eldorado-Towanda	13,300	13,250
Florence-Covert	850	800
Greenwood County	17,000	16,500
Oxford	2,500	2,500
Peabody-Ebling	2,450	2,400
Rainbow Bend	1,150	1,150
Russell	3,150	3,150
Sedgwick	19,100	20,800
Voshell	11,550	12,100
Others	28,000	29,000
Total	105,750	108,300

NORTH LOUISIANA

Caddo Heavy	2,750	2,700
Caddo Light	8,150	8,150
Carterville	1,900	1,800
Cotton Valley	1,750	1,800
DeSoto-Red River	2,750	2,750
Haynesville	5,450	5,400
Holly	900	1,000
Homer	3,300	3,200
Urania	5,000	5,000
Zwolle	7,650	8,400
Others	1,550	1,550
Total North Louisiana	41,150	41,750

LOUISIANA GULF COAST

Bayou Boullion	100	100
East Hackberry	4,650	4,500
Edgerly	400	300
Evangeline	700	950
Hackberry	850	900
Lake Barre	1,700	1,700
Lockport	5,300	4,300
Port Barre	1,900	1,900
Sorrento	50	50
Sulphur Dome	2,800	2,600
Sweetlake	1,150	1,150
Vinton	5,850	6,200
White Castle	1,000	1,000
Others	2,450	2,200
Total Louisiana Gulf Coast	28,900	27,850
Louisiana Total	70,050	69,600

ARKANSAS

Champagnolle	4,750	3,700
El Dorado	3,900	3,900
Lisbon	800	800
Nevada	1,050	1,000
Smackover Heavy	34,100	34,150
Smackover Light	4,550	4,250
Stephens	850	850
Others	1,050	1,100
Total	51,050	49,750

MOUNTAIN STATES

WYOMING

Big Muddy	1,900	1,900
Elk Basin	750	650
Grass Creek	2,050	1,950
La Barge	1,800	2,000
Lance Creek	150	150
Lost Soldier	3,150	4,400
Oregon Basin	2,900	2,900
Rock River	2,150	2,050
Salt Creek	23,100	28,100
Others	4,400	4,450
Total	42,350	48,550

MONTANA

Cat Creek	1,150	1,150
Pondera	1,450	1,950
Sunburst	4,450	4,450
Others	50	50
Total	7,100	7,600

COLORADO

Florence	450	500
Fort Collins	1,150	1,150
Moffats (Craig)	900	1,000
Others	1,600	1,500
Total	4,100	4,150

NEW MEXICO

Artesia	650	650
Balance Lea County	8,150	7,700
Hobbs High	30,300	31,700
Hogback	400	450
Rattlesnake	1,100	1,100
Table Mesa	100	50
Eddy	300	100
Total	41,000	41,750
Total Mountain States	94,550	102,050

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., N. Y.)	101,500	103,750
Michigan	9,950	9,550
Total Eastern States	111,450	113,300

PRODUCTION SUMMARY

East of Rockies	1,451,850	1,442,550
Total U. S.	2,084,900	2,082,100

MARKET SECTION

of its enforcement would be a policy of reaction and against the public interest."

This endorsement of the conservation statutes has been taken as a move in opposition to legislation, which may come before the Oklahoma legislature, which is in session. The outgoing administration left a deficit and it was intimated that the shortage of state funds was due largely to reduced income from the gross production tax on oil, which in turn had resulted from proration.

The Independent Oil Operators of Oklahoma has announced that it will seek to have the ratio of production to potential raised to 10 per cent in the Oklahoma City pool.

California Curtailment End Is Threatened by Committee

The California statewide curtailment committee issued a statement on January 11 to the effect that if full curtailment is not accomplished this week, there is likelihood that the entire conservation program will be abandoned. Such a step hardly seems probable, although the statement issued hints that operators who have been carrying the burden will not long continue to do so in the face of an overproduction in certain fields, particularly Santa Fe Springs and Playa del Rey where excesses have approximated 30,000 barrels. It is claimed that if either Playa del Rey or Venice fails to do its part the whole curtailment plan will fail. The settled fields have been carrying the burden of excesses since the inauguration of the curtailment program and it is stated in plain words that these fields will not permit the correct cuts while other districts are overproducing. The state excess is less than 35,000 barrels and it is hoped that the excesses in two or three fields will not lead to the abandonment of the entire curtailment program.

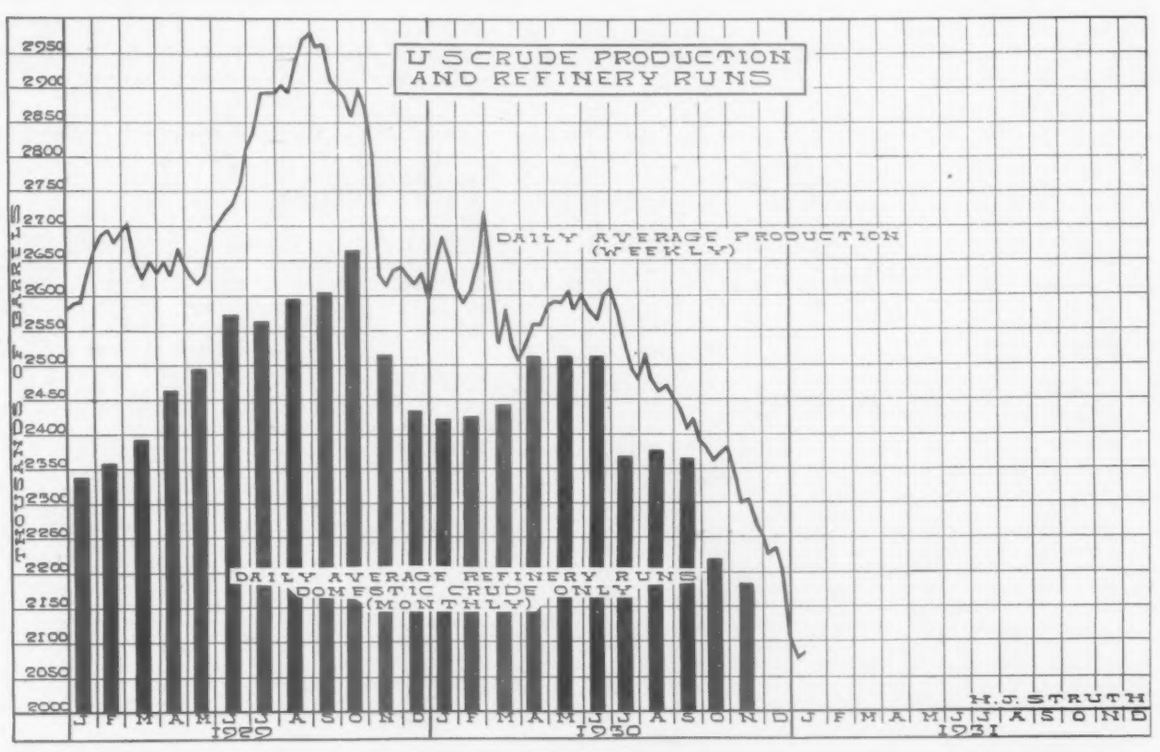
The statement by the general committee intimates that a tariff may ultimately be the solution of the problem, leaving the impression that abandonment of conservation might lead to a generally disturbed condition until this protection is afforded. Immediate adoption of the 500,000-barrel plan and reduction to the correct level is urged.

The retail gasoline market has been unsteady as the result of a widespread distribution at prices far below the regular posted schedule maintained by the major companies. Some of the larger independent refineries have been wholesaling gasoline to retailers who have sold it through stations at 12½ cents. A reduction in the retail price of gasoline probably would go a long way toward correcting the wide spread between the accepted retail price and that of the cut price stations.

Cut Texas Crude Prices Two to 28 Cents a Barrel

Effective January 14, Humble Oil & Refining Company posted reductions on crudes produced in North Texas, Panhandle, Texas, and the Texas Gulf Coast. Prices in North Texas were cut 10 cents a barrel on oil below 29 gravity, with a two-cent differential to 40 gravity and above, which was reduced 28 cents a barrel.

Panhandle oil in Gray and Hutchinson Counties was cut two cents a barrel for the lowest gravity and 20 cents a bar-



MARKET SECTION

Weekly Comparisons of Permits Granted for New Wells

	Week Ending January 10	Previous week	This week 1930	Total this Month	This month 1930	Total this year	Total this date last year	1930 year total
Arkansas	1	..	2	1	7	1	7	108
California	5	3	13	8	34	8	34	922
Louisiana	8	10	20	18	37	18	37	948
Kansas	7	4	31	11	41	11	41	944
Oklahoma	19	20	103	39	134	39	134	2,830
Texas	80	64	245	144	416	144	416	7,052
Total	120	101	514	221	769	221	769	12,804

rel on the highest gravity oil. The differential for each degree in Panhandle oil has also been set at two cents.

Gulf Coast Grade "A" crude was reduced 20 cents a barrel, while the "B" grade was cut six cents a barrel for the lowest gravity and 21 cents a barrel on the highest gravity. Refugio crude was reduced six cents a barrel for the lowest gravity and 21 cents a barrel for the highest gravity.

Hobbs Citizens Petition End of Proration of Production

Santa Fe, New Mexico.—An open meeting was held here January 5 with the new land commissioner, James Hinkle, presiding, at which 22 operators in the Hobbs field petitioned for continuance of the proration policy in effect until January 10, for another six months. At the same time a delegation of citizens from Hobbs, New Mexico, were on hand to fight the petition, which temporarily, was not granted. Later Commissioner Hinkle announced that proration would be continued.

The Hobbs delegation, headed by Counsel James Briscoe, presented an appeal which stated that in their opinion, proration was "detrimental to the best interests of the citizens and state." Reasons offered included: the desire upon the operators' part to avoid taxation; development of oil properties in foreign lands; extensive wildcatting activities both in this country and abroad by existing operators; and maintenance of a lower price for New Mexico crude.

Representatives of operating companies in turn offered reasons why proration was necessary, citing the large amount of oil now above ground, the increased efficiency in refining, and the possible effect on Hobbs oil if the "lid" were to be removed.

There followed rebuttal testimony by both factions. Following the testimony, the commissioner handed down his decision, continuing proration as it now stands. He stated, however, that four of the operating companies had left loopholes by which they could resign from the agreement at the end of 90 days. The decision delays for at least 90 days continuance of the fight against proration.

Summarized Review of Field Results

State—	Completions This week	Completions Last week	Oil Wells This week	Oil Wells Last week	Gas Wells This week	Gas Wells Last week	Failures This week	Failures Last week	Initial Prod. This week	Initial Prod. Last week
Arkansas	3	2	1	1	1	..	1	1	5	10
California	10	19	8	14	..	..	2	5	6,900	7,650
Indiana	..	1	..	..	..	..	..	1	...	...
Kansas	9	7	1	4	7	..	1	3	100	3,625
Kentucky	..	24	..	13	..	2	..	9	...	5,173
Louisiana	15	12	8	5	4	3	3	4	2,820	1,818
Michigan	..	4	..	3	..	..	..	1	...	390
Mississippi	1	2	..	..	1	1	..	1	...	...
New Mexico	5	3	..	1	1	..	4	2	...	100
New York	3	..	3	..	..	..	..	..	8	...
Ohio	31	22	10	4	12	9	9	9	60,810	23
Oklahoma	23	40	8	23	5	4	10	13	436	164,861
Pennsylvania	30	4	18	1	5	2	7	1	35	50
Texas	77	85	28	32	6	13	43	40	26,418	22,308
West Virginia	16	21	5	2	8	14	3	5	32	4
Illinois	4	..	1	..	..	..	3	..	12	...
Total	227	246	91	103	50	48	86	95	97,576	206,012
Increase	..	..	..	..	2	..	..	..	...	...
Decrease	19	..	12	..	..	..	9	..	108,436	...

MARKET SECTION

Crude Oil Price Quotations

(Revised to January 13, 1931)

CRUDE PRICE CHANGES

Effective January 14, Humble Oil and Refining Company posted reductions on Wichita, Wilbarger, Archer and Northern Young Counties, North Texas; Gray County, Panhandle, Texas; and Gulf Coast crudes. The new schedule for Gulf Coast oil conforms with that posted by the Gulf Pipe Line Company, October 30, 1930.

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Bradford—Alleghany district (posted by Tide Water Pipe Co., Ltd.) (Effective Nov. 13, 1930)	$2.15
Penna. Grade Oil in National Transit Lines (Other Pennsylvania) (Effective, Nov. 13, 1930)	1.85
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania) (Effective Nov. 13, 1930)	1.80
Penna. Grade Oil in Eureka Pipe Lines (West Virginia) (Effective Nov. 13, 1930)	1.70
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O.) (Effective Nov. 13, 1930)	1.45
Corning Grade in Buckeye Pipe Lines (Ohio) (Effective Oct. 28, 1930)	1.25
Somerset Oil in Eureka Pipe Lines (Effective July 23, 1930)	1.14
Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 9, 1929)... *Oil run prior to July 1, 1929 is $2.10 per bbl.	0.60

(Posted by Stoll Oil Refining Company)

Oil City, Ky., oil in Stoll lines (Effective Oct. 28, 1930)	1.10

MICHIGAN

(Posted by Dixie Oil Company)

Traverse and Dundee (Muskegon), effective April 16, 1930, same gravity and price schedule as Prairie posts in Oklahoma and Kansas, on gravity basis prior to reduction on Oct. 27, 1930.

(Posted by Pure Oil Company)

Midland, Midland County, Oct. 27, 1930..$1.10

CENTRAL STATES FIELDS

(Posted by Ohio Oil Company)

(Effective Oct. 28, 1930)

Wooster	$1.35	Princeton	1.30
Lima	1.10	Illinois	1.30
Waterloo	1.20	Plymouth	.88
Indiana	.87	W. Kentucky	1.15

CANADIAN CRUDE

(Posted by Imperial Oil Refineries, Ltd.)

(Effective October 28, 1930)

Petrolia	$1.50
Oil Springs	1.57

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co., and Stanolind Crude Oil Purchasing Company, Effective Nov. 1, 1930. Carter Oil Company Same Schedule Effective Oct. 28.

Below 29	$0.65	35-35.9	.92
29-29.9	.69	36-36.9	.95
30-30.9	.73	37-37.9	.98
31-31.9	.77	38-38.9	1.01
32-32.9	.81	39-39.9	1.04
33-33.9	.85	40 and above..	1.07
34-34.9	.89		

Magnolia Petroleum Company Effective October 28.

Below 26	.53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here to 40 and above gravity same schedule as above.

NORTH TEXAS

North Texas Crude in Wichita, Wilbarger, Archer, and Northern Young counties:

(Effective Jan. 14, 1931)

Below 29 gravity	$ .55
29-29.9	.57
30-30.9	.59
31-31.9	.61
32-32.9	.63
33-33.9	.65
34-34.9	.67
35-35.9	.69
36-36.9	.71
37-37.9	.73
38-38.9	.75
39-39.9	.77
40 and above	.79

Ranger, North Texas except as listed above, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran, and Nocona crudes:

(Effective Jan. 14, 1931)

Below 29 gravity	$ .65
29-29.9	.69
30-30.9	.73
31-31.9	.77
32-32.9	.81
33-33.9	.85
34-34.9	.89
35-35.9	.92
36-36.9	.95
37-37.9	.98
38-38.9	1.01
39-39.9	1.04
40 and above	1.07

(Continued on Page 58)

California Prices

Effective September 15, 1930, at 7:00 A. M. the following are the current prices offered by STANDARD OIL COMPANY OF CALIFORNIA

Gravity	Signal Hill	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Playa del Rey†
14-14.9	$ .70	$ .70	$ .70	$ .70	$ .70	$ .70			$ .70	$ .70	3 .70	$ .70	$ .70		$ .55	$ .55	$ .55	$ .55	$ .55	$ .55	
15-15.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
16-16.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
17-17.9	.70	.70	.70	.70	.70	.70			.70	.70	.70	.70	.70		.55	.55	.55	.55	.55	.55	
18-18.9	.76	.76	.76	.76	.76	.76			.76	.76	.76	.71	.76		.55	.62	.62	.62	.62	.62	
19-19.9	.82	.82	.82	.82	.82	.82			.82	.82	.82	.77	.82		.55	.70	.70	.70	.70	.70	
20-20.9	.88	.88	.88	.88	.88	.88			.88	.88	.87	.83	.87			.78	.78	.78	.78	.78	$.74
21-21.9	.94	.94	.94	.94	.94	.94			.94	.94	.93	.90	.93	$.92		.86	.86	.86	.86	.86	.77
22-22.9	1.00	1.00	1.00	1.00	1.00	1.00			1.00	1.00	.98	.97	.98	.95		.94	.94	.94	.94	.94	.81
23-23.9	1.07	1.07	1.07	1.07	1.07	1.07			1.07	1.07		1.05	1.04	1.01		1.02	1.02	1.02	1.02	1.02	.84
24-24.9	1.12	1.12	1.12	1.12	1.12	1.12	$1.12		1.12	1.12		1.08	1.08	1.05		1.06	1.06	1.06	1.04	1.04	.87
25-25.9	1.17	1.17	1.17	1.17	1.17	1.17	1.17		1.17	1.17		1.11	1.12	1.09		1.10	1.10	1.10	1.06	1.06	.90
26-26.9	1.22	1.22	1.22	1.22	1.22	1.22	1.22		1.22	1.22		1.15	1.16	1.13		1.14	1.14	1.14	1.08	1.08	
27-27.9	1.26	1.26	1.26	1.26	1.26	1.26	1.27		1.26	1.26		1.19	1.21	1.18		1.18	1.18	1.18	1.11	1.10	
28-28.9	1.30	1.30	1.30	1.30	1.30	1.30	1.32		1.30	1.30		1.23	1.25	1.23		1.23	1.23	1.23	1.15		
29-29.9	1.34	1.34	1.34	1.34		1.34	1.37			1.34		1.26	1.29	1.28		1.29	1.29	1.29	1.19		
30-30.9	1.38	1.38	1.38	1.38		1.38	1.42			1.38		1.29	1.33	1.33		1.35	1.35	1.35	1.23		
31-31.9	1.43	1.43	1.43	1.43		1.43	1.43							1.38		1.41	1.41	1.41	1.27		
32-32.9	1.48	1.48	1.48	1.48			1.52							1.43		1.47	1.47	1.47	1.31		
33-33.9							1.57							1.48		1.53	1.53	1.53	1.35		
34-34.9							1.62	$1.32						1.53				1.59	1.39		
35-35.9							1.66	1.39						1.58				1.65	1.43		
36-36.9							1.72	1.46						1.63							
37-37.9							1.78	1.53						1.68							
38-38.9							1.84	1.60						1.73							
39-39.9							1.90	1.66						1.78							
40-40.9							1.96	1.72													
41-41.9							2.02	1.78													
42-42.9							2.08	1.84													

F. O. B. Ship

KETTLEMAN HILLS*	
35-39.9	$1.10
40-44.9	1.20
45-45.9	1.35
50-54.9	1.50
55 and above	1.65

*Posted by Union Oil Company. †Effective December 18, 1930.

MARKET SECTION

CRUDE OIL PRICE QUOTATIONS (*Continued from Page 57*)

PANHANDLE

(Effective Jan. 14, 1931)

Gray County Crude

Below 29 gravity	$ .48
29-29.9	.50
30-30.9	.52
31-31.9	.54
32-32.9	.56
33-33.9	.58
34-34.9	.60
35-35.9	.62
36-36.9	.64
37-37.9	.66
38-38.9	.68
39-39.9	.70
40 and above	.72

(Effective Jan. 14, 1931)

Carson and Hutchinson County Crude

Below 29 gravity	$ .43
29-29.9	.45
30-30.9	.47
31-31.9	.49
32-32.9	.51
33-33.9	.53
34-34.9	.55
35-35.9	.57
36-36.9	.59
37-37.9	.61
38-38.9	.63
39-39.9	.65
40 and above	.67

WEST TEXAS

Posted by All Purchasers, Effective October 28, 1930

Winkler and Pecos County Crudes:

Below 25	$ .55	31-31.9	.69
25-25.9	.57	32-32.9	.71
26-26.9	.59	33-33.9	.73
27-27.9	.61	34-34.9	.75
28-28.9	.63	35-35.9	.77
29-29.9	.65	36 and above	.79
30-30.9	.67		

Crane, Upton, Crockett, Ector, Ward, Loving, Mitchell,* Howard, and Glasscock Counties, Texas, and Lea County, New Mexico crudes

Posted by All Purchasers, Effective Oct. 28, 1930

Below 25	$ .50	31-31.9	.64
25-25.9	.52	32-32.9	.66
26-26.9	.54	33-33.9	.68
27-27.9	.56	34-34.9	.70
28-28.9	.58	35-35.9	.72
29-29.9	.60	36 and above	.74
30-30.9	.62		

*Magnolia Petroleum Company uses Gravity scale and Coltex Refining Company pays flat price of 60 cents for Mitchell County.

GULF COAST

(Posted by Humble Oil & Refining Company, The Texas Company and Sun Company)

Gulf Coast Crude will be classified as follows in fields designated below:

Goose Creek, Hull, Boling, Liberty, Orange, Pierce Junction, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugar Land, West Columbia and Humble crudes:

"A" GRADE—All crudes conforming to the following tests:

Viscosity—Not less than 100 seconds at 100° F. Saybolt.

Sulphur—Not over .4%.

Beaume Gravity—Not over 25 at 60° F.

Cold test of distillates having a viscosity of 1000 seconds at 100° F, shall not be over 5° F.

"A" GRADE—$ .80.

"B" GRADE — Embraces all Coastal crude which does not meet the test for "A" grade crude:

(Effective Jan. 14, 1931)

High Island	$ .75		
Grade "A"	.80		
Grade "B"			
Below 25	$ .69	33-33.9	.87
25-25.9	.71	34-34.9	.89
26-26.9	.73	35-35.9	.91
27-27.9	.75	36-36.9	.93
28-28.9	.77	37-37.9	.95
29-29.9	.79	38-38.9	.97
30-30.9	.81	39-39.9	.99
31-31.9	.83	40 and above	1.01
32-32.9	.85		
Jennings, La.	.80		
Markham (The Texas Company)	.75		

SOUTHWEST TEXAS

Effective Jan. 14, 1931

Refugio Heavy crude, below 25 gravity	.69		
Refugio Light crude:			
25-25.9	$ .71	33-33.9	.87
26-26.9	.73	34-34.9	.89
27-27.9	.75	35-35.9	.91
28-28.9	.77	36-36.9	.93
29-29.9	.79	37-37.9	.95
30-30.9	.81	38-38.9	.97
31-31.9	.83	39-39.9	.99
32-32.9	.85	40 and above	1.01
Mirando crude	$ .69		
Salt Flat crude	.90		
Darst Creek crude	.90		
Pettus crude	1.10		
Luling	.75		
Corsicana, heavy	.75		

Determination of quality, deductions, adjustment for temperature, etc., on oil purchased in Texas, shall be in accordance with the rules and regulations of the Texas Railroad Commission, and on oil purchased in New Mexico shall be in accordance with the rules and regulations of the Corporation Commission of New Mexico.

LOUISIANA-ARKANSAS

All Purchasers Except Magnolia Petroleum Co., Effective Oct. 29, 1930

Pine Island District, Haynesville District, Bull Bayou District, El Dorado District, Rainbow District, Cotton Valley

Below 29	$ .65	31 to 31.9	.77
29 to 29.9	.69	32 to 32.9	.81
30 to 30.9	.7333	to 33.9	.85
34 to 34.9	.89	40 to 40.9	1.07
35 to 35.9	.92	41 to 41.9	1.10
36 to 36.9	.95	42 to 42.9	1.13
37 to 37.9	.98	43 to 43.9	1.16
38 to 38.9	1.01	44 and above	1.19
39 to 39.9	1.04		
Urania, La.	.75		
Bellevue, La.	1.00		

Magnolia Petroleum Company, Effective October 30, 1930

Below 26	$ .53	27-27.9	.61
26-26.9	.57	28-28.9	.65

From here prices same as schedule above.

STEPHENS

Below 29	$ .54	31 to 31.9	.66
29 to 29.9	.58	32 and above	.70
30 to 30.9	.62		
Smackover	.70		
El Dorado, East Field	.70		

ROCKY MOUNTAIN FIELDS

(Salt Creek prices effective Oct. 28, 1930)

‡Salt Creek	29-29.9	.69
" "	30-30.9	.73
" "	31-31.9	.77
" "	32-32.9	.81
" "	33-33.9	.85
" "	34-34.9	.89
" "	35-35.9	.92
" "	36-36.9	.95
" "	37 and above	.98
Elk Basin (Effective Oct. 28, 1930)		1.25
Grass Creek light		1.25
Big Muddy		1.00
Lance Creek		1.33
Rock Creek		1.01
Mule Creek		1.20
Rex Lake		1.10
‡Osage (Nov. 1, 1930)		.85
‡Cat Creek, Montana		1.25
Pondera		1.45
Sunburst, Montana		1.55
‡Hogback, New Mexico		1.40
Artesia, New Mexico		.75

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

STATE CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.

Texas—Two per cent of gross value.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 per cent of gross market value.

Montana—Two per cent of gross value at well.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

WASHINGTON CONCERNED OVER PRAIRIE
(Continued from page 21)

States occasioned by the ever-increasing imports of crude oil and refined products, especially gasoline, which imports have absorbed in large measure the markets of the Eastern States, which were formerly supplied by oil produced in the Eastern States, the Mid-Continent fields and California. The whole Southwest is dependent to a great extent, directly or indirectly, upon the oil industry, which in turn supports many other lines of business engaged in manufacture of steel products, machinery and other oil well supplies. In fact, the distress in the petroleum industry is not local to the states producing oil, but is being felt by the whole United States through loss of purchasing power amounting to hundreds of millions of dollars per annum in the 19 states producing and refining oil by reason of which relief for the petroleum industry would automatically bring a measure of relief to the entire country."

"Distress Oil" Committee Adjourns for More Reports

Tulsa.—The whole question of providing outlet for the additional wells of the settled areas of Oklahoma and Kansas came back to the sub-committee of representatives of the oil purchasing companies Tuesday morning.

After this session, R. M. Young, president of Carter Oil Company and chairman of the committee, addressed the following report to E. B. Reeser, president of the American Petroleum Institute:

"A thorough study was made of the situation confronting those producers who were left without a market on January 1 by reason of the discontinuance by the Prairie Oil & Gas Company of the purchase of their oil. As a result of this study and discussion the committee wishes to make the following statements:

"First. At the New York meeting of the American Petroleum Institute on January 8, there was a difference of opinion as to the exact amount of distress oil affected. Ray M. Collins, Oklahoma proration umpire, is compiling the exact information and accurate figures should be available January 15 for the consideration of the committee.

"Second. A survey made by the committee indicates that the amount of distress oil which was indicated at 14,500 barrels in the committees last report, has by reason of various arrangements made by the various operators and purchasers, now declined somewhat.

"A careful study of the statement to be secured from Mr. Collins will definitely establish the figures.

"Third. The proposition made by this committee under date of December 31, 1930, still holds good. Briefly the proposition made was for the various companies to purchase from leases of Prairie Oil & Gas Company or its nominee an amount of crude oil up to 14,500 barrels per day, provided Prairie Oil & Gas Company will buy a like amount from those operators where Prairie Pipe Line Company only is connected and where no market now exists.

"The committee wishes to point out that the acceptance of this proposal by Prairie Oil & Gas Company would result in Prairie Oil & Gas Company having to run and purchase no more oil than the amount which they are now running and is the most effective means by which the greatest number of distress properties can be given both immediate and permanent relief without undue burden to anyone.

"While this matter is being worked out your committee urges that all operators who find themselves without a market should exhaust all means at their command in taking care of their individual situations, as every barrel taken care of by the efforts of individual producers simplifies the problem of your committee."

Reports to A. P. I. Board Show Situation Improving

New York.—A meeting of the committee appointed by the American Petroleum Institute to endeavor to work out a solution for relief of producers of "stripper" wells in Oklahoma and Kansas, occasioned by the withdrawal of Prairie Oil & Gas Company as a purchaser, will be held in Tulsa early next week, probably Tuesday, according to President E. B. Reeser.

At a meeting of the board of directors of the Institute, held here January 8, the progress of the work of this committee was fully discussed, and it was decided by the board that the committee continue its efforts. After the meeting Mr. Reeser stated that he believed a method would be worked out whereby most, if not all, of the oil involved would be taken by individual oil companies.

The chairman of the Tulsa committee is R. M. Young of Carter Oil Company, and the committee was appointed following a request by the Federal Oil Conservation Board that the Institute endeavor to work out a solution.

It was the opinion of the board of directors that the Institute should vigorously oppose the announced policy of the railroads for legislation that would subject pipe line common carriers to the same restrictions as to transportation of commodities, as the railroads. Mr. Reeser was authorized to appoint a committee which will act in an advisory capacity to the board in this matter.

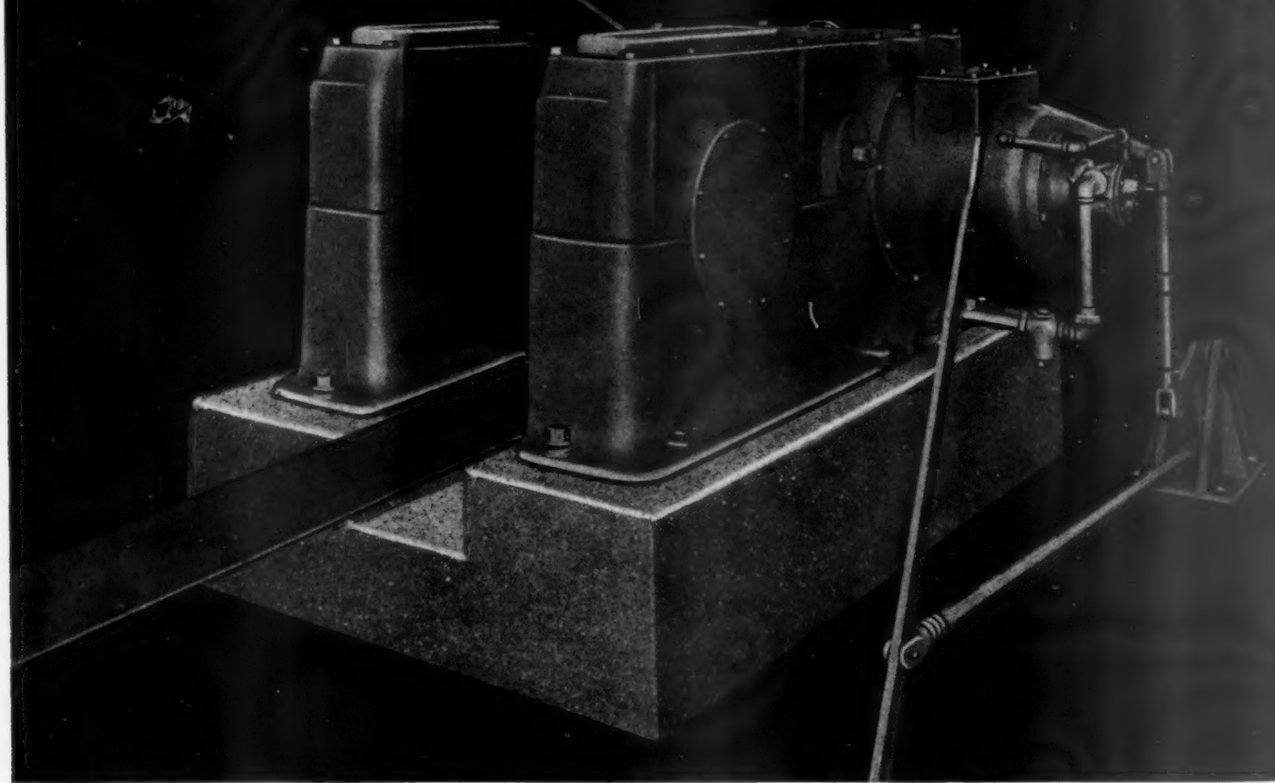
Reports were rendered to the board by R. C. Holmes, chairman of the General Committee, Division of Refining; Robert R. Penn, chairman of the General Committee, Division of Production; and E. G. Seubert, chairman of the General Committee, Division of Marketing. Mr. Holmes presented statistics showing the gasoline situation in the various districts and pointed out the very substantial improvement that has taken place in the gasoline stock situation recently. He expressed the belief that through the efforts of individual companies to curtail gasoline production stocks of gasoline on April 1 would be within the total recommended by the Institute's economic committee, that is, 40,000,000 barrels. Mr. Penn, who was unable to be present at the meeting, reported that in his belief the proration structure was stronger than at any time within the history of the movement. In the last 18 months there has been a decline of 33 1/3 per cent of the daily crude oil production in the country, and this, he stated, constitutes a record of achievement probably not equaled by any other industry in efforts to meet problems of overproduction. With respect to resolutions offered concerning the National Code of Marketing Practices, no changes were made or new interpretations recommended by the board of directors.

A motion was passed by the board for the appointment of a committee of lawyers to prepare a uniform state gasoline tax law to prevent effectively the evasion of payment of the gasoline tax. The board also renewed its opposition to unreasonable gasoline taxes and to the diversion of the tax to uses other than for roads.

A resolution was also passed favoring a national legislative program designed to meet demands both for relief of unemployment and expansion of highway systems.

COOPER-B

PRESENTS THE NEW



Flexible coupling connection.

Variable speed reduction.

Positive neutral position.

Positive forward position.

Positive reverse position.

Velvet-smooth engagement.

Oil-flooded mechanism.

Self-adjusting facings.

YOU'RE ALWAYS SAFE IN CHOOSING A COOPER-BESSEMER

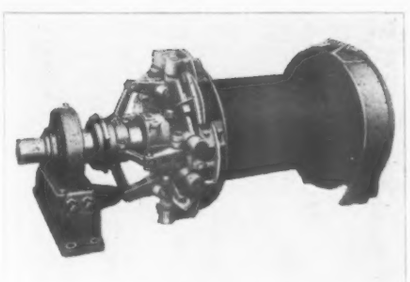
BESSEMER

REVERSIBLE SPEED REDUCER

HUNDREDS of production men were attracted to this new unit at the Tulsa Exposition last October. None of them had ever seen or shifted a reverse clutch so smooth, so quiet, so positive as this. This unit is sufficiently strong and durable to withstand the punishment of band wheel or rig front work on deep wells.

With the Reversible Speed Reducer, you don't have to use 14 inch, 16 inch or 18 inch clutch pulleys to reach the right pumping speed. Nor does the pulley size restrict your engines to a speed of 180 r.p.m. if they can turn over faster. You get the desired band wheel speed for any rated engine speed from 180 to 300 r. p. m., and the desired pulling or swabbing speeds for any maximum engine speed from 350 to 600 r.p.m. Reverse is faster than forward in any ratio you want up to 2 to 1.

Main shaft and pulley shaft roll on Timkin bearings. Roller chains have an unusually high factor of safety. Three removable covers make the interior very accessible. Let our representative point out the engineering and operating features of Type—GRF.

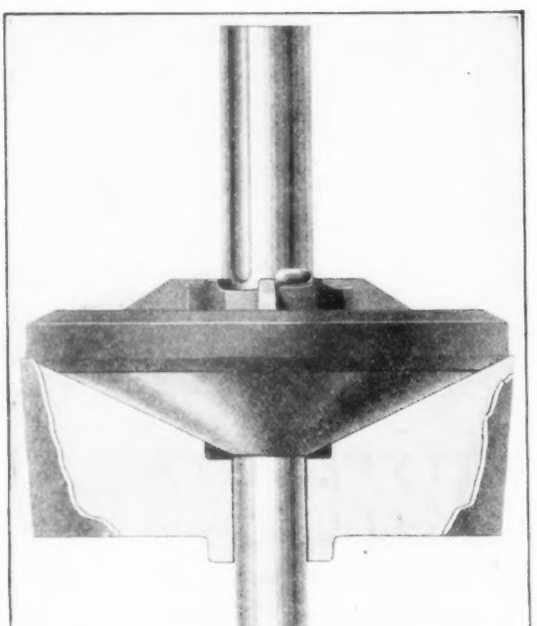


THE NEW TYPE—GRA REVERSE CLUTCH

Rated 50 B.H.P. at 180 R.P.M.
Reverse speed ratio of 2 to 1.
Pulley wide enough for 22" belt.
5-inch heat treated steel shaft.
Babbit or roller outboard bearings.
Zerk-lubricated bronze bushings and bronze bearings in reverse drum.
Reverse gear pinions on Hyatt bearings.

THE COOPER-BESSEMER CORPORATION, • Mt. Vernon, Ohio, • Grove City, Pa.

We make 67 types of valves ...not a one has been imitated successfully!



No matter what mud pump you buy you may be sure that there is a MacClatchie valve to fit it. All are built according to the time-proven design originated by MacClatchie. All are made up of only the finest special alloys and carefully processed rubber. All are backed by a record of economy and service that is without an equal.

MacClatchie developed the valve years ago and the principle of the design has never been changed. Several applications, now on file at the Patent office, will shortly give full protection to those who are standardizing on MacClatchies. Order a set on trial today. You will soon see why "There are more MacClatchie Valves sold than any other make." ***Quality is responsible!***

MacCLATCHIE

MANUFACTURING COMPANY, COMPTON, CALIFORNIA.

Branches in Houston, Texas; Ventura and Bakersfield, Calif.

Valves stocked by all Mid-Continent Continental Supply Stores

PERSONAL MENTION-MEN YOU KNOW

Sam H. Woods, district geologist for Twin State Oil Company in the southern Oklahoma district for approximately 7½ years, was transferred from Ardmore, December 15, 1930, to the Tulsa office of the company. Mr. Woods will continue in charge of his former district and will assist in the geological work in other districts.

Fred A. Worthey, who was connected with the sales department of Axelson Manufacturing Company, died in Los Angeles on January 6, 1931.

Alexander Anderson, pioneer in the underground surveying of wells, has spent several weeks in New York City and Washington, D. C., while on an extended business trip. He will return to California during the latter part of January.

F. S. VanDeinse, umpire for California during a part of 1929 and formerly a vice-president of California Petroleum Corporation, has been made Western representative of Hammon-Oakridge Oil Company interests, with headquarters at San Francisco.

Tom Cannon, well known independent operator in the Long Beach field, recently underwent an operation while in San Francisco. He has completed some large producers and will develop holdings in other parts of the state.

Paul Boggs, head of the general curtailment committee and vice-president of Union Oil Company of California, has been spending some time in San Francisco while working on details of the present conservation program.

Louis Chappuis, well known consulting geologist, has moved his office to 1232 Chapman building, Los Angeles.

A. E. Gibson of the British Burma Oil Company at Chauk has not spent Christmas at his home in Canada for 20 years. He made the grade this year, however, but was pressed for time and could spend but a few days around Los Angeles where he wanted to inspect equipment and visit some of the fields. He could not see more than one or two fields but received a comprehensive idea of the late equipment in use by inspecting the displays at the permanent Oil Equipment and Engineering Exposition at Los Angeles. He was advised that he could thus see the most in the shortest space of time by Lee Leissler, also of the Burma Oil Company in Burma, who was familiar with the exposition service and had spent considerable time in inspecting the tools and machinery on display there.

Clarence W. Jones, district field superintendent for Midwest Refining Company in the Salt Creek field, has had his duties extended to include supervision of activities at Midway Dome and Geary Dome, north and east of Casper. His headquarters will remain at Midwest, Wyoming. Clarence D. Buffett, assistant district superintendent, has been made superintendent in the Salt Creek field.

Floyd Miller, for the past three years in charge of the land and geological department for Reiter-Foster Oil Company, announced his resignation effective January 1. Prior to joining that organization, Mr. Miller spent four years in the geological department of Marland Oil Company of Colorado, engaged in the study of regional geology of the Rocky Mountain states. He will open an office in Tulsa engaging in a general consulting practice and specializing in regional geology of the Rocky Mountain and Mid-Continent areas.

Edwin Allen McPherson, 58, died January 6 of heart trouble after having recovered from a first stroke suffered while en route by boat from Philadelphia to his home in Beverly Hills, California. He was formerly of Fort Worth and Dallas, Texas, but for the past several months has resided in Pittsburgh and Philadelphia where the firm of E. A. McPherson has maintained offices.

EDWIN ALLEN MCPHERSON

Mr. McPherson has been known to the oil industry for a number of years as a pipe line contractor, his company having built some of the country's lines. He built the Houston pipe line from Houston to the Southwest Texas Gas fields in 1926, and at the time of his death was building Sun Oil Company's gasoline line from Marcus Hook to Pittsburgh, Pennsylvania.

Dr. C. L. Baker was the featured speaker January 13 at the weekly luncheon of the Houston Geological Society, discussing "Glacial Deposits of the Upper Haymond in the Marathon Area."

Mrs. K. P. Farish of Houston, mother of three oil company presidents, died Tuesday morning, January 13. She is survived by one daughter, Miss Rosalie Farish, and three sons, W. S. Farish, president of Humble Oil & Refining Company, S. P. Farish, president of Navarro Oil Company, and R. D. Farish, president of Farlyn Oil Company, all of Houston. It was announced that burial would be at Natchez, Mississippi, former home of the family.

John B. Atkins, vice president, Shreveport-El Dorado Pipe Line Company and Sparco Gasoline Company, was recently elected president of the Shreveport chamber of commerce for 1931.

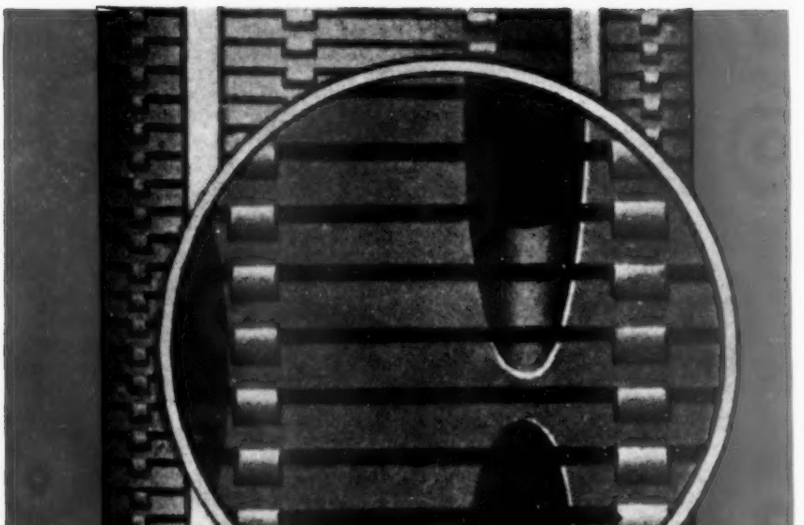
C. L. Gladden, district superintendent of production at Wewoka, Oklahoma, for Magnolia Petroleum Company, has been transferred to general offices of the company at Dallas to become assistant to the general manager of production.

James K. Aimer has been appointed assistant general manager of sales in charge of railroad, locomotive and car equipment sales, also bar iron and billets sales for Reading Iron Company. He is located at 230 Park Avenue, New York City.

M. J. Bonham of the Continental Oil Company was elected president of the Southwest Texas Oil Scouts and Land Men's Association at the first monthly meeting of the year held at the Gunter Hotel, San Antonio, January 9. He was formerly secretary-treasurer. R. E. McClung, Southwest Texas representative of Phillips Petroleum Company, was elected vice-president, and L. R. Caskey of Republic Production Company, with headquarters in San Antonio, was elected secretary-treasurer.

Jesse Bullard, Shell Petroleum Corporation and John O. Givson, Lion Oil Company, are retiring president and vice-president, respectively. Ed. Owen, Wentz Oil Corporation and Tom H. Terry, The Texas Company, were named members of the executive committee.

Aside from the election of officers



for those who want the

MOST *in the* SHORTEST TIME

Knowingly, very few companies will refuse to increase production out of an oil well! Successful companies, the larger and most important, know the value of the "greater production" Layne Milled Groove Screen—they will testify that it increases production from between 33-1/3% to 100%. You save dollars, increase production, and show greater profits when using oil industry's latest, greatest and most important invention, the Layne Milled Groove Screen.

THE LAYNE MILLED GROOVE SCREEN

Write, wire or phone for any further information or quick service.

The Layne & Bowler Co.

Houston **Texas**

Install Milled Groove Instead of Wishing You Had

A QUARTER CENTURY OF EXPERIENCE AND DEVELOPMENT

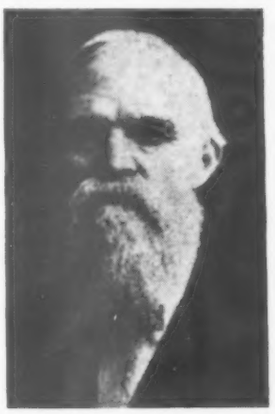
there were two talks on the program. George Martin of Luling discussed salt water disposal in Luling and Darst Creek fields, and Riley O'Quinn, petroleum engineer, Humble Oil & Refining Company, spoke on pipe corrosion in those fields due to sulphur water.

W. F. Cummins, retired geologist of the Southern Pacific Company and its subsidiaries, Rio Bravo Oil Company and East Coast Oil Company, died on January 8, 1931, at his residence, 2735 Gold Street, El Paso, Texas, where he had been living for some years prior to retirement on April 1, 1925.

Mr. Cummins was nearly 91 years old at the time of his death, and was one of the last of the old geologists whose study and work formed the foundation for present knowledge of the geology of Texas. He was the author of many valuable articles, and was for many years an outstanding figure. He was identified for a particularly long period with petroleum geology. Aside from his services with the Southern Pacific lines, he did notable work during his career with the Geological Survey of Texas.

Mr. Cummins first entered the service of the Southern Pacific interests on January 15, 1903, as field foreman of the Saratoga field in charge of operations of Rio Bravo Oil Company at that point. In 1907 he was transferred to position of geologist for the parent company under the late E. T. Dumble, consulting geologist of the Southern Pacific System and vice president and general manager of Rio Bravo Oil Company and East Coast Oil Company.

Cummins served in the Civil War as a scout in the operations against the Banks Red River Expedition and was in the battle of Pleasant Hill. Perhaps he acquired his first geologic experience when he mined for the Confederate Army copper from the Permian and Red Beds of North Texas. He first became geologically prominent when he proved the existence of the Permian system of rocks in Texas. Cummins collected a large share of the Permian fossil amphibians and reptiles from Baylor and Archer Counties, Texas.



W. F. CUMMINS

In 1889 he became one of that truly remarkable group of men assembled by the late E. T. Dumble in the Geological Survey of Texas. Cummins' contribution was the mapping, classification, and description of the Pennsylvanian, Permian, Triassic, lower Pliocene and Pleistocene deposits of North Central and Northwest Texas. This work has amply withstood the tests of time.

In 1907, at the age of 67, he was sent to Mexico by the Southern Pacific interests. He there located the discovery wells of the Panuco, Topila and Mendex-Corcovada fields, was the first to state that the upper Jurassic was probably the source of the oil in the Tampico fields and successfully sustained his view that the rocks overlying the Panuco oil horizons was upper Cretaceous.

Cummins was born in Webster County, Missouri, on June 13, 1840, and is survived by his wife, two daughters, Mrs. Peyton J. Edwards and Mrs. Horace Sweat, and one son, Duncan, all of El Paso.

Tulsa Geological Society held its annual meeting Monday evening, January 5, at which time the following officers were elected to serve during 1931:

R. S. Knappen, Gypsy Oil Company, was chosen president to succeed Frank C. Clarke of Mid-Kansas Oil & Gas Company; Fred A. Bush, chief geologist, Sinclair Oil & Gas Company, first vice president, succeeding Ira Cram, Pure Oil Company; C. L. Severy, consulting geologist, was made second vice president, succeeding T. E. Weirick, Tidal Oil Company; and Ronald Cullen, geologist, Twin State Oil Company, secretary-treasurer, succeeding E. A. Markley, Barnsdall Oil Corporation. The new council will be composed of the officers, the retiring president, Harry Wright, consulting geologist and engineer, L. E. Kennedy, geologist for Douglas Oil Company, and H. E. Rothrock, chief geologist for Superior Oil Company. All of the newly elected officers are men who have taken an active part in the affairs of the society during 1930 and a banner year is anticipated under their direction.

Frank C. Clarke, the retiring president, presented a paper on "Oil Pools," dealing with the accumulation of oil in reservoir rocks. Considerable discussion followed presentation of the paper and it was generally agreed that too little study has been devoted to theory of accumulation. Mr. Clarke will expand the paper for later publication in the technical journals.

W. Scott Heywood of Jennings, Marrs McLean of Benton, R. L. Gay of Zwolle and A. H. Tarver of Shreveport, were named by Governor Long of Louisiana to represent that state in the oil operators' conference at Washington on January 15.

Officers Named by Tulsa Geological Society to Serve in 1931

R. S. KNAPPEN
President

FRED A. BUSH
First Vice President

C. L. SEVERY
Second Vice President

RONALD CULLEN
Secretary-Treasurer

Oklahoma--Kansas Field Notes

FLOYD L. SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Tatums Pool Holds Lead in Southern Oklahoma Interest

Tulsa.—The Tatums district continued to lead Southern Oklahoma in interesting development when three wells were completed and two new locations announced during the past week. Carter Oil Company's J. T. Grooms 1, SE NE NE Section 24-1s-3w, swabbed 580 barrels during the first 14-hour gauge from sands logged between 1920 and 2033 feet. Total depth is 2080 feet in shale. Magnolia Petroleum Company's Mose Dickerson 3, NW NE SE Section 24-1s-3w, swabbed 1001 barrels the first 24 hours from sand topped at 2020 feet and penetrated to a total depth of 2148 feet. This test is of particular interest in view of the fact that it is located only 100 feet north of the company's Mose Dickerson 1, which was drilled to 4240 feet without encountering production and is directly between that test and the Mose Dickerson 2, which was completed as a 2500-barrel well.

Leonard J. Woodruff's Brady 1, NW SW SW Section 32-1s-2w, approximately two miles southeast of production in the main pool and three-eighths of a mile southeast of Frank Gouin et al's recently completed producer, is cleaning out and swabbing at the rate of 25 to 50 barrels daily from sands logged between 1900 and 1920 feet. It is estimated as good for 100 barrels daily when cleaned out to the present total depth.

Trevelyn Oil Company has completed derrick and is rigging up on its Mitchell 4, SW SW SE Section 24-1s-3w, in the south end of the extension. Magnolia Petroleum Company has announced location for its Ethel Gill 9, SW SE NE Section 23-1s-3w, in the east edge of the older part of the pool. Same company is drilling below 2600 feet in its R. F. McCrory 1, SE SE SE Section 10-1s-3w, three-quarters of a mile northwest of production. Oil sand was encountered in this test at 2335 feet and it was showing indications for an extension last week.

Louis Sykes' Kirk 1, NW NW SE Section 16-1s-8w, four miles west and one mile south of Duncan, in Stephens County, has been plugged and abandoned at 3356 feet. W. O. Smythe et al are drilling below 1200 feet in their House 2, NW NW NW Section 29-2n-8w, seven miles north and six miles west of Duncan. Obermeyer-Taylor's Skelton 1, NE SW SW Section 32-1s-7w, five miles south of Duncan, is shut down at 1375 feet. Ross Southard et al's O. R. McKinney 1, NE NE NE Section 25-1n-8w, three miles northwest of Duncan, is shut down at 1063 feet. Junior Oil Company's A. M. Thompson 1, SE SE Section 1-1n-7w, four miles east and five miles north of Duncan, is drilling below 300 feet. Crane and Rankin's Adkins 1, NE NE SE Section 14-1n-9w, just north of the Oil City pool, is shut down at 2535 feet.

Comanche District Active

George Pace et al's Watkins Estate 7, NW NE SE SE Section 21-2s-7w, two miles east of Comanche in Stephens County, swabbed 600 barrels the first 24 hours from sand topped at 1710 feet and penetrated to a total depth of 1718 feet. Hawks-Ware and Carter Oil Company have announced location for their Ada Duncan 1, NE SW NE Section 28-2s-7w, 1¼ miles northwest of the Watkins Estate 7. Empire Oil & Refining Company's Miller 2, SE NE NE NE Section 5-2s-8w, an old well deepened on the south side of the Empire field, has been plugged and abandoned after getting water in the sand at 2240 to 2250 feet.

F. W. Merrick, Inc., is pulling tubing preparatory to rerunning and putting on the pump, its J. B. Schermerhorn 10, SW SW NW SW Section 5-4s-3w, new producer in the west portion of the old Healdton field. It is estimated good for 75 to 100 barrels from sand topped at 1139 feet and penetrated to a total depth of 1174 feet. Same company is drilling below 906 feet in its McKey 1, SE SW SW Section 20-4s-2w, midway between the Healdton and Hewitt fields in Carter County. Johnson-Merrick's Gladney-Williams 1, NE NE SE Section 19-4s-2w, approximately one-half mile northwest of the McKey 1, is preparing to recover drill pipe lost in the hole at total depth of 2100 feet. Oil sands have been logged at 1280 to 1284 feet and 1372 to 1382 feet.

Gilcrease Oil Company's Burkhart 1, C NE NE NW Section 13-8s-1e, wildcat test about five miles southwest of Marietta in Love County, is drilling below 1170 feet.

Action of Wewoka Wells May Require Application of Lift

Tulsa.—Mid-Kansas Oil & Gas Company and Ramsey Petroleum Company's Davis 2, NEC SE NW Section 30-8n-8e in the new Wewoka townsite area, refused to flow when opened on January 5. Agitation the following day revived the flow and the well produced 1247 barrels in two hours. One location north, the company's Davis 3 produced 3210 barrels the first four hours and 50 minutes but settled to about 25 barrels per hour thereafter. Production the following day was 3320 barrels in five hours and 20 minutes. The Davis 2 was good for better than 16,000 barrels initially. Action of these two wells indicates that artificial lift will be necessary.

Droppleman et al's Lack 1, SW SE NW Section 30-8n-8e, produced only 1400 barrels in 24 hours from 49 feet of Cromwell topped at 3095 feet and penetrated to 3144 feet. It is a north offset to Burk-Greis Oil Company's Henshaw 1 which was good for 5000 barrels in the same horizon, and a southwest diagonal offset to Mid-Kansas Oil & Gas Company and Ramsey's Davis 2.

Barrett and Diffie's Wilson 1, SW SE SE Section 19-8n-8e, had top of the Wapanucka at 3338 feet and Cromwell at 3450 feet, with a hole full of water in that formation between 3450 and 3480 feet. This test had Wapanucka 390 feet structurally lower and top of the Cromwell 499 feet structurally lower than in Deep Rock Oil Corporation's M. L. Smith 2, SW NW NE Section 30-8n-8e, slightly over one-quarter mile to the southwest and nearest producer to it. Ligon and Todd's Wilson 1, NW NW NE Section 30-8n-8e, northeast diagonal offset to Mid-Kansas Oil & Gas Company and Ramsey's Davis 3, missed the Wapanucka and had Cromwell sand at 3185 feet, 183 feet structurally lower than in Deep Rock Oil Corporation's M. L. Smith 2, Wilcox sand was encountered at 4123 feet, 215 feet structurally lower than in the Smith 2.

Six Completions and Three Locations at Oklahoma City

Oklahoma City.—Six completions and two locations were included in the activities of the past week in the Oklahoma City pool. Chatham Oil Company's Chatham-Ecroat 1, NW SE NW Section 10-11n-3w, largest among the list, produced 7660 barrels in three hours from 258 feet of Simpson formation topped at 6272 feet. Total depth is 6530 feet. Top of the Wilcox sand was encountered at 6300 feet.

Phillips Petroleum Company's Highland 1, SE SW NE Section 10-11n-3w, had Wilcox sand from 6331 to 6411 feet and was drilled to a total depth of 6440 feet. It produced 5031 barrels in four hours flowing through a four-inch line on January 8. Plains Petroleum Company and Denver Producing & Refining Company's Hatfield 1, SW SE NW Section 10-11n-3w, had an initial gauge of 350 barrels in one hour and 15 minutes from 170 feet of Simpson formation topped at 6330 feet. Top of the Wilcox was at 6355 feet. The well is one location west of production. It will be operated by Denver Producing & Refining Company.

R. A. McArthur's Armour 1, SW NW NW Section 2-11n-3w, topped the Simpson at 6257 feet and produced 6000 barrels in two hours and 55 minutes from total depth of 6481 feet. Top of the Wilcox was at 6257 feet.

Empire Oil & Refining Company's Gustine 2, SW NW NE Section 1-11n-3w, was a somewhat pleasant surprise in view of the poor showing of the Gustine 1, located one-quarter mile south. The Gustine 2 had top of the Simpson at 6334 feet, top of the Wilcox at 6472 feet. Total depth is 6472 feet. It is rated at 6000 barrels daily. Both wells are in the vicinity of the fault. Previous development had indicated that neither would make large production from the Wilcox.

Scott Drilling Company et al have a relatively small well at their Ashby 1, NE NE NW Section 14-11n-3w, in the older part of the pool. The well made 400 barrels in two hours and 15 minutes from 335 feet of Simpson formation topped at 6247 feet. It is estimated good for 3500 barrels of fluid daily but is cutting 16 to 40 per cent. Operators believe the water is coming from behind the pipe and will attempt repair work on that theory.

No water study has been attempted in the Oklahoma City pool so operators are unable to determine the source of water except by process of elimination which sometimes requires a long period of time during which the well and many of its offsets may be harmed by intrusion.

Interest has been rather high during the past 10 days in regard to the potential of the pool. Otto Bradford, field umpire, commenced taking individual potentials on January 2, and is progressing at the rate of 50 to 60 wells per day. Potential for the pool has been estimated at 5,388,000 barrels for January and allowable production set at 1½ per cent of that figure.

Kansas Completions Ahead of Locations in Busy Week

Wichita, Kans.—Twelve locations were announced in Kansas during the past week as compared with 13 the week before. The week was a busy one with 14 completions consisting of eight oil producers, two gassers, and four dry holes. Lario Oil & Gas Company and Shell Petroleum Corporation's Ritz "A" 1, NE SW Section 1-20s-2w, in the Ritz pool, had Mississippi lime from 2937 to 2978 feet, gauging 4359 barrels. Shell Petroleum Corporation's Anderson 1, SE NW Section 30-19s-1w, had the Viola lime at 3410 to 3419 feet and an initial production of 480 barrels. McPherson Oil & Gas Company completed its Griffin "B" 1, CSW NE Section 14-19s-2w, for an initial flow of 26,438,000 cubic feet of gas. W. C. McBride, Inc.'s Griffin 1, NE SW of the same section, gauged 28,300,000 cubic feet. Both wells are producing from the chat, the former between 2880 and 2937 feet and the latter between 2892 and 2921 feet.

Vickers Petroleum Company's Binger 2, NE NW SE Section 21-20s-10w, Schurr pool, produced 720 barrels from 8½ feet of pay in the siliceous lime topped at 3340 feet. Same company's Vickers 3, NW NE SE Section 21-20s-10w, had pay from 3346 to 3359 feet and produced 430 barrels initially.

Signal Oil Company's Rude 1, NE SE SE Section 28-15s-13w, Russell County, made 600 barrels from three feet of pay in the siliceous lime topped at 3349 feet.

According to statements of Tom C. Johnson, proration umpire for Kansas fields, various McPherson County pools now have a daily potential in excess of 105,000 barrels. Voshell is rated at 69,639 barrels, and Ritz at 35,578 barrels. The former pool is prorated at 18.81 per cent of potential and the latter at 16 per cent of potential. However, some of the operators are without connections and the two pools are not producing their allowable. W. C. McBride Incorporated, one of those without an outlet, is constructing two 55,000-barrel tanks in the Voshell district. Gypsy Oil Company and Dixie Oil Company are among those who have no outlet and are daily falling behind in allowable production.

Two Seminole Area Wells Have Small Initial Flow

Tulsa. — Prairie Oil & Gas Company and T. B. Slick Estate's Maxey 1, SEc NW Section 1-8n-6e, east of Bowlegs, has been completed as a small producer after being plugged back to 3959 feet for water shut off. Strapp and King's Townsite 1, SWc NW Section 8-9n-5e, Earlsboro townsite, had the Wilcox at 4346 to 4355 feet. It was good for approximately 100 barrels per day in the Viola lime. Gypsy Oil Company's Denmark 5, SE SW SE Section 11-7n-6e, in the Little River pool, flowed 585 barrels in 24 hours from a total depth of 3154 feet. The well is being tubed.

Tulsa. — Prairie Oil & Gas Company and T. B. Slick Estate are preparing to abandon their Perkinson 1, CSW SW NW Section 22-7n-2w, McClain County, 6½ miles northwest of Purcell and approximately 25 miles southeast of the Oklahoma City pool. Total depth is 6655 feet.

Tulsa.—Droppleman et al's Fundis 1, SEc NE Section 19-7n-3e, west of Pearson Switch, had top of the Wilcox at 5374 and is drilling below 5408 feet in sand with a hole full of water.

Tulsa.—Magnolia Petroleum Company announced location for its Whitney 1, SW SW SE Section 24-5n-7e, in Seminole County, and its Reed "A" 1, NE NW NE Section 26-5n-7e, in Pontotoc County, both in the Allen pool.

Tulsa.—John Droppleman et al have announced location for their P. Charty 1, NE SW SW Section 29-6n-6e, west offset to Gypsy Oil Company's Charty 1, recent south extension well. The latter well had what is believed to be a stray sand at 2597 to 2609 feet, where it flowed 341 barrels of 37 gravity crude in four hours and 40 minutes.

North and West Texas Field Notes

H. H. KING, ***Staff Representative, Fort Worth, Texas***

Refinery Plans Revived by Moore County Well Showing

Amarillo, Texas.—Completion of a 3500-barrel producer from lime formation in the Dumas field, located in northern Moore County, by Sunray Oil Company has resulted in this concern reviving its plans to erect a refinery so as to obtain market relief. A second refinery project for the area is also being considered by the Shamrock Oil & Gas Company, which maintains headquarters at Amarillo, as the latter has two flowing wells and a like number of drilling tests, with a large volume of leases scattered over the structure. The Bartex Pipe Line Company, subsidiary of Phillips Petroleum Company, has a six-inch extension line built into the Dumas field from the Skelly-Byrd field, located on the Moore-Hutchinson County line, a distance of about 17 miles. This line was completed early in October, 1930, and suspended operations November 1 when the owner discontinued buying oil in the Texas Panhandle.

Sunray Oil Company's C. R. Jones 1, located 330 feet out of the SEc W½ SW Section 164, block 3-T, T.&N.O. Ry. Survey, blew in last week from lime horizon at 3359-71 feet, and gauged 1000 barrels during first nine-hour gauge, then was shut in for storage. The gas flow accompanying the oil production was rated at 20,000,000 cubic feet daily, while the oil is reported to test 37 gravity. This new producer is a west offset to Operators Royalty Company, a subsidiary of Sunray Oil Company, and the Dana Oil & Gas Company's C. R. Jones 1, which showed for a big producer in April, 1930, then developed water trouble. The latter logged lime pay at 3360-72 and 3387-95 feet, with a big increase in oil production at 3410 feet, where a flow of 380 barrels oil first four hours was made, then water troubles began.

In order to obtain a market outlet for these two wells, and other tests that are to be drilled Sunray Oil Company is contemplating erection of a 5000-barrel refinery, located about three miles to the north at the town of Altman, which is located on the Rock Island Railroad.

Shamrock Oil & Gas Company, a pioneer operator in the Dumas field, is also contemplating the erection of a refinery, and may locate same about 10 miles to the west at a point where the new branch line of the Santa Fe Railroad will intersect the branch line of the Rock Island. Such a location offers possibilities of two fuel oil contracts, while the two lines will permit the penetration of a greater marketing territory. There is no indication that Phillips Petroleum Company will resume the transportation and marketing of crude from the Dumas field through its subsidiaries. The latter's line is available for common carrier hauls to the Borger district, but this older oil section of the Panhandle is having difficulty in supplying pipe line and market relief for local wells.

No Curtailment Necessary

Sunray Oil Company is free to produce its Panhandle properties at their maximum rate through having obtained a temporary injunction on October 30, 1930, that restrains the Texas Railroad Commission from enforcing its proration rules on the above company's leases.

Continental Oil Company joined the ranks of Dumas field operators late last week by starting operations on its W. J. Morton 1, located 900 feet out of the northwest corner of the SE Section 172, block 3-T, T.&N.O. Ry. Survey, or about one mile southeast of the big producer. Gulf Production Company's B. Dore 1, C SE Section 312, block 44, H.&T.C. Ry. Survey, is drilling in lime at 2856 feet with rotary. This test is about three miles southwest of the west extension of the field. Delmar Oil Company's C. R. Jones 1-A, located in the northwest quarter of Section 171 and south offset to the former producer, is flowing about 100 barrels oil and a like volume of water daily at 3360-3460 feet, and will be plugged back. A. D. Morton et al's W. H. Reeder 1 uncovered the Dumas area in June, 1927. Development has lagged because of lack of market outlet.

Current production in the Texas Panhandle is averaging about 53,990 barrels daily, with Gray County furnishing 41,550 barrels of this quota. The maximum production allowance for the district, according to proration rules, is fixed at 40,000 barrels daily. The excess withdrawal is partially due to Sunray Oil Company and Danciger Oil & Refining Company having enjoined proration, while owners of offset wells to these companies' properties are permitted to open up in proportion in order to equalize drainage.

Disappointments are being met with by operators in the Sullivan area, located in western Gray County, as additional tests drill past the expected flush production horizon, which was uncovered middle September, 1930, with a 10,000-barrel well by Taconian Oil Company's (now J. T. Harrell et al) Robt. Sullivan 1. Magnolia Petroleum Company's Latham 1, two locations to the west, has quit making water after applying 100 pounds back pressure, and is flowing about 425 barrels daily at 3108-53 feet after making an initial of 1500 barrels middle December. Latham 2 is swabbing about 80 barrels daily at 3132-99 feet from granite wash formation. Danciger Oil & Refining Company's Barrett 1 was added to the list of disappointments during the past week, and was showing for a small producer after drilling below 3200 feet. Midgray Oil Company's Sam McCullough 1, widened the area to the west, when first oil began showing at 3200-09 feet, with slight increases at intervals while drilling to 3325 feet. The latter is making small heads oil, and may be shot. Phillips Petroleum Company's Barrett 1 is flowing about 100 barrels daily after drilling to 3407 feet, while the same company's Barrett 2 is fishing tools at 3146 feet.

Lee County Wildcat, South of Chapman Field, to Test

Taylor, Texas.—A. H. Wheeler's Stolz 1, wildcat located in Lee County about six miles west of Lexington and the same distance south of the Chapman field of Williamson County, is reported by its owner to have cored formation identical with that above serpentine in the Chapman field, with gas and live oil floating in the ditch. He says the well is now shut down awaiting casing, plans being to set about 2000 feet of 6⅝-inch pipe for an early test. Location of this wildcat is 2372 feet from the west line and 4675 feet from the south line of the Hiram Donahoo Survey.

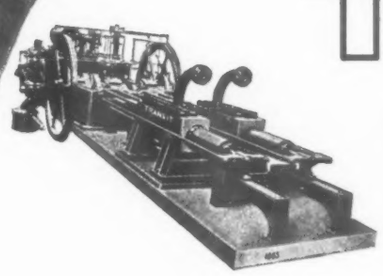
RIGHT BEFORE YOUR EYES

Repair Delay may be Robbing You!

Hush! - - a secret: Sometimes even TRANSIT PUMPS need a few repairs.

You know how it is with a part of your refinery shut down awaiting repair parts. We do everything humanly possible to get parts to you when you want them, but just the same sometimes there is bound to be a delay.

Stop it! Be Prepared. Now while things are a little slack in the oil industry, why not have your man in charge go over the old timers? A new part here and there will probably put your TRANSIT PUMPS in ship shape again for the storm that is bound to follow this calm.



TRANSIT HOT OIL PUMPS

Los Angeles
Tulsa
Houston

NATIONAL TRANSIT PUMP & MACHINE CO.
OIL CITY, PA.

New York
Philadelphia
Cleveland
Pittsburgh

TULSA and MID-CONTINENT FIELD
Frick-Reid Supply Corporation

NEW ORLEANS, LA.
Woodward, Wight & Co.

SALT LAKE CITY, UTAH
F. C. Richmond Machinery Co.

LOS ANGELES
Republic Supply Company of California

BEAUMONT, TEXAS
E. L. Wilson Hardware Company

PHOENIX, ARIZ.
Pratt-Gilbert Co.

ST. LOUIS, MO.
Reeves & Skinner Machinery Co.

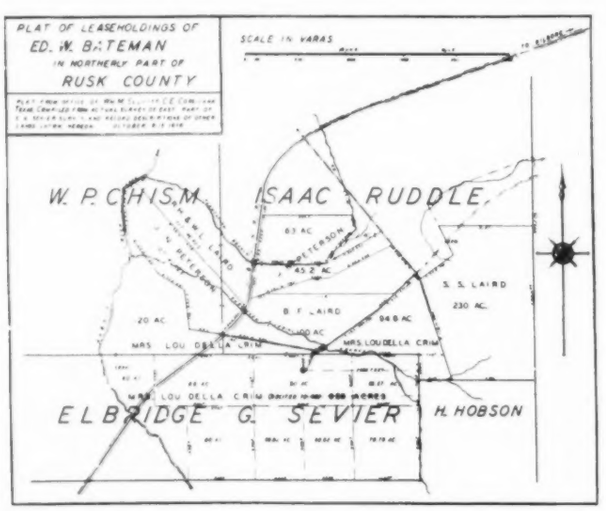
East Central Texas Fields

Humble Buys Bateman Block Paying Two Million Dollars

Tyler, Texas.—Humble Oil & Refining Company has contracted to purchase the wildcat producer and drilling block of about 1400 acres of Ed. W. Bateman and associates in northwestern Rusk County for a consideration involving approximately $1,500,000 cash and about $600,000 payable out of oil as produced. Actual consummation of the deal rests with approval of the titles to the properties, and in the meantime Humble Oil & Refining Company is taking steps to give the discovery well its first definite production test.

Transfer of this discovery well and surrounding acreage into the hands of a major company may permit prompt introduction of a conservative drilling and producing program, but a reasonable volume of activity is already assured by reason of tests getting underway on the edges of the Bateman holdings. Nearly a dozen companies have propositioned Bateman with a purchase contract since the wildcat tests on the Crim farm, E. Sevier Survey, near Kilgore, flowed at rate of 900 barrels high gravity oil per hour, based on first 40-minute gauge from Woodbine sand at 3630 to 3642 feet on December 28. Humble Oil & Refining Company was one of the most likely to buy the property, as its potential oil holdings at Van have dwindled in recent months, while the company has a 10-inch pipe line extending only a few miles north of the Bateman producer. This line was built to supply Central East Texas crude, particularly from Van, to the Baton Rouge refinery of Standard Oil Company of Louisiana, which is also a subsidiary of Standard Oil Company of New Jersey. Plans of the latter group to provide a greater market outlet for Van crude were suddenly recalled last week when it became apparent that a private supply of crude would be acquired in Rusk County.

Bateman has promoted a number of drilling projects in various parts of the state through the financing of companies by the mail order plan. He took on the Kilgore drilling block shortly after the discovery of the Joiner field, and assigned interests to two of his companies that promptly raised sufficient capital to complete the first well, so it was not necessary to dispose to the full stock issue. Bateman personally retained a large interest in the project, while interests are also held by C. F. Corzelius, Arthur A. Diehl and others, all of Fort Worth.



Two rotary outfits were being installed on the south edge of the Bateman block early this week that will require as many offsets for the purchasers of the discovery well and leases. E. M. Jones, San Antonio producer and drilling contractor, is to drill on the recently acquired west 10-acres of the Mrs. W. R. Crim 50-acre tract, Robt. E. Winn Survey, having made location in the northwest corner of the lease. J. W. Olvey of El Dorado is moving in to drill on the 20-acre lease out of the same farm, having made location 731 feet east and 150 feet south of the northwest corner of the farm. Harry W. Bleam, Fort Worth, is to make a try for production about two miles to the south by drilling Jernigan 1, located in the northwest corner of 15-acre lease, John C. Snow Survey.

Burton Drilling Company is to test out acreage to the west of the Bateman area, having staked location 2250 feet north and 150 feet west of the southeast corner of the E. P. S. Florey farm, Peter Holmes Survey. W. L. Brandon, Fort Worth contractor, and associates have contracted to start drilling prior to February 8 on the J. F. Richards 122½-acre farm. Mary Van Winkle Survey, or about 3½ miles northeast of the Bateman producer. These locations are the forerunner of a large group of contemplated tests in the area.

Gregg County Wildcat Show Compares With Bateman Well

Tyler, Texas.—Discovery of a third oil area in Central East Texas within a 100-day period along a stretch of 23 miles across Rusk and Gregg Counties appeared promising early this week when an oil saturated sand core was recovered from a wildcat in the north central part of Gregg County. This new strike became evident on the morning of January 30 when W. A. Moncrief and J. E. Farrell, Fort Worth operators, and Arkansas Fuel Oil Company's F. K. Lathrop 1, located northwest of the Pine Hill community, pulled a 10-foot core at 5363 to 3573 feet. Scores of representatives of oil companies were on hand to witness the coring efforts, despite the early hour, and before noon a scramble was on for lease and royalty protection in the general area. All territory lying to the southwest of this prospective producer by way of the Bateman-Kilgore shut-in well to the Joiner field, Rusk County, a distance of about 23 miles, is now popular with lease and royalty buyers, as there are no deep dry holes to condemn any of the acreage.

Casing is to be set in the Gregg County test before further attempt will be made to convert it into a producer at the present depth. Comparisons made of the Gregg County wildcat with the Bateman core indicate more saturation

in the former. However, the Bateman test gave little promise of being a commercial well when the sand horizon was cored at 3642 feet, then fooled everyone by flowing at the rate of 900 barrels oil per hour on brief test.

Moncrief and Farrell sold an undivided half interest in their Gregg County drilling block last October to Arkansas Fuel Oil Company for $25,000 and the former contracted to drill a 3500-foot test, with E. A. Showers serving as contractor. Drilling began December 3 on Lathrop 1, which is located 1241 feet east and 730 feet south of the northwest corner of a 96-acre tract, Wm. Robinson Survey.

In the event this Gregg County test comes through the commercial production it is quite probable that Arkansas Fuel Oil Company will proceed with work on a direct pipe line to refineries of Louisiana Oil Refining Corporation, an affiliated concern, near Shreveport. The latter is now a patron of Rusk County producers, using tank cars for transportation.

Third East Texas Strike Makes Big Area Prospect

Houston.—Coring of a saturated oil sand in Farrell et al's Gregg County wildcat, Lathrop 1, early this week is regarded as possibly presaging one of the greatest oil fields ever developed in Texas, for it is believed this well may be an extension of the same pool tapped by the Ed Bateman producer, Crimm 1, located 12 miles to the south in Rusk County, and by Joiner et al's Bradford 3, original producer of the area, located 10 miles still farther south.

These three widely separated wells are in line with each other, and all are approximately the same depth, although the Farrell test is 57 feet higher structurally than the Bateman producer.

The rapidity and the methodical precision with which the two new oil horizons have been found along the northward trend from the original Joiner area producer would seem to indicate, it is pointed out, that each of the three wells is not a discovery well, but that each of the two latter constituted an extension of the original pool.

Should the three wells prove in fact to be in the same pool, this great pool, with minimum length of 25 to 30 miles, would be one of the greatest single producing areas in the oil history of Texas—a field of proportions unprecedented in the state.

Surface elevation of the Gregg County test of Farrell and associates is 400 feet. At 3561 feet the well was coring chalk with streaks of shale after encountering top of chalk at 3524 feet. Top of the saturated sand was at 3567 feet, or at 3167 feet sub-sea.

Multiplication of Drilling in Joiner Area to be Rapid

Tyler, Texas.—Twenty active rigs will be operating in and near the Joiner field before the close of the present week, and each of these will call for one to three offsets in event production is obtained. A steady gain in drilling activity is assured regardless of proration efforts, and the main object of the majority of these operators is to rush wells to completion and obtain long time crude contracts before further price concessions are made. Prospective crude buyers are anticipating a flood of distressed price oil, and are slow in making contracts, while the only transportation available for production is via tank cars at present. A sample of the price sacrifice that must be borne by producers and royalty owners in forcing a market outlet is illustrated by the fact that the first crude contract of any consequence involving Joiner crude nets the well owners only about 50 per cent of the Mid-Continent posted price for 38-40 gravity oil. Sale of crude to drilling rigs is being made at 75 cents per barrel, and this fuel oil demand is expected to provide a sizeable local market outlet until a sufficient gas supply is available.

Enforcement of Joiner Area Proration Appears Difficult

Fort Worth, Texas.—Enforcement of production proration in the Joiner field promises to become the most difficult of any field in Texas because of the presence of scores of small drilling sites, while only a small percentage of the operators are in sympathy with the move. The two private gathering systems and tank car rack units now in service were built primarily to serve controlled oil, and market outlets lined up by these interests and others that propose to invade the field with tank car loading facilities will not be available for other producers to share in. However, the two units will handle oil for others to the tank cars for a fixed tariff.

Six wells have been completed as oil producers in the Joiner field, and the combined output of these is averaging above 3000 barrels daily, with the largest amount coming from Frank Foster-Deep Rock Oil Company et al's Ashby 1, which is rated at more than 5000 barrels daily, although completed December 13 at an estimated initial of 3000 barrels daily at 3597-3616 feet. Tex Lloyd et al's Camp 1, located on a five-acre site to the northwest of the discovery well, was completed late last week at 3541-67 feet swabbing and flowing at rate of 100 barrels per hour. This well is to be deepened. Temporary arrangements have been made to tender a limited amount of production to Panola Pipe Line Corporation for storage, Anderson-Williamson County Properties' Bradford 1, located on a four-acre site, is flowing by heads at rate of 75 barrels daily via two-inch tubing from a total depth of 3592 feet. This well is depending upon local fuel oil sales at 75 cents per barrel to provide storage accommodations at its battery of two 500-barrel tanks.

Large Operators Acquire Leases in Joiner Section

Tyler, Texas.—Another west by south extension to the Joiner field loomed possible early this week when Lide-Taylor Oil Company, Inc.'s Calvin Young 1, M. J. Pure Survey, logged top of first chalk at 2714 feet, with top of hard Pecan chalk at 2755-feet. This test was drilling in chalk below 2930 feet, with a surface elevation of 475 feet at last reports. While it is lower than the nearest producer, there is a normal dip in the chalk formations to the west. The above company was recently incorporated by David M. Lide, W. H. Rowe and Lee Taylor, with a capital stock of $100,000. Headquarters are located at Tyler.

Entrance of major companies into the Joiner field to share in the expected flush production is now quite certain, although the larger interests have heretofore been inclined to carry out a hands-off policy in regard to close-in leases. Tidal Oil Company contracted for a 40-acre and a 15-acre lease in the northwest part of the Juan Ximinez Survey, and only a short distance north of the largest producer in the Joiner area. The largest lease is described as being the west 40-acres of the Mrs. A. P. Finney 105-acre, and is in the extreme northwest corner of the survey. Tidal Oil Company plans to start drilling on the south end of the smaller lease immediately upon approval of title, probably within a week. This small lease is described as the east 15-acres of the west 55-acres of the C. E. Holland 105-acre tract, and Tidal acquired an undivided half interest and op-

erating control from Wm. Johnston of Oklahoma City. Johnston previously bought the lease from Imperator Oil Corporation and R. W. Bond, paying $16,000 cash, and carrying the latter jointly with a 1/16 over-riding royalty.

It is understood that Tidal Oil Company proposes to drill up the Holland lease promptly in the event attractive production is scored from the first test, and in the meantime the company is making preliminary arrangements to privately handle its expected production. It is quite probable that Tidal Refining Company will enter the field with a gathering system should production justify, as the company is supporting the Tidal Oil Company's producing properties in Church & Fields area, West Texas, and at Hobbs and Eunice, New Mexico, in a like manner.

Example of Close Spacing

A striking example of close spacing of wells to accompany development of a portion of the Joiner field is offered by the recent sub-division made on the Claude D. Ashby east 15.34-acre tract out of the south 64.14-acre Ashby tract, Juan Ximinez Survey. This 15.34-acre tract has been divided into six separate drilling sites, ranging from two to three acres in area, and operations are underway on four of the possible six tests. In order to create room for all tests and adhere to proper well spacing distances, the drilling sites have been cut up into odd shapes, including triangles and diamonds. Tract No. 6 on the lower end of the sub-division calls for the drilling of a test 125 feet from abutting property lines, but all the others are 150 feet, or more, removed from lease division lines. More than a half dozen direct offsets will be forced by the drilling of these small tracts.

Robert Oil Corporation, Brackenridge, and G. H. Chizum, Fort Worth attorney, is drilling tract Number 1 on the Ashby sub-division, and materials have been moved in for the drilling of tract Number 2 by J. W. Akin, Jr. & J. P. Rayzor, Wichita Falls operators, and R. H. Dearing, Dallas contractors, while Bert J. Shaw, Wichita Falls producer, is drilling tract Number 3 and carrying Imperator Oil Corporation for a free well in order to obtain an undivided half interest. A similar arrangement was made by Cade Johnson, Dallas, on tract Number 4, as J. F. Crabtree and Bill Rowe are drilling a free well for a half interest. The land owner has retained lease on tract Number 5, while tract Number 6 is owned jointly by Ashby and Chizum.

Texas Buys Lease

Included in the numerous new locations staked in the Joiner area during the past week is a test to be drilled by J. S. Anderson, Fort Worth operator, in the southeast corner of the south 20-acre of the E. B. Alford 35-acre tract, located northwest of the Tex Lloyd producer. Anderson has awarded contract to the Sam Cook Drilling Company, Fort Worth, and drilling must be started by January 17. Anderson-Williamson County Properties, Fort Worth, is moving in company outfit from its completed well on the Bradford four-acre site to the Thrash 17½-acre tract, M. J. Pure Survey, to drill its second test.

The Texas Company has contracted to purchase an 80-acre lease out of the L. J. Pinkston 133-acre tract, located in the northeast corner of Section 23, J. B. Cadena Survey and southwest of the Joiner field, from Imperator Oil Corporation and R. W. Bond, paying $125 per acre cash and $75 per acre out of oil. Sinclair Oil and Gas Company is reported to have paid $1000 per acre, half cash, to Foster-Deep Rock Oil Company et al for lease on 63 acres out of the C. C. and J. A. Giles farm, M. J. Prue Survey, and northwest of the biggest well in the field.

Request for Van Production Increase Again Postponed

Tyler, Texas.—Application for an increased production allowance for the Van field has been temporarily postponed for a second time, as result of Humble Oil & Refining Company having withdrawn its support to the movement in order to make available for Rusk County production a portion of the market outlet and transportation facilities this company was to have provided at Van. A hearing was to have been held at Austin, January 10, by the Texas Railroad Commission to consider the plea of Van operators for a graduated production increase from the present quota of 27,500 barrels daily to 50,000 barrels daily after February 15, but the meeting was called off beforehand. A similiar fate befell a hearing that was slated for December 10.

Launching of negotiations for the purchase of the wildcat oil producer of Ed. W. Bateman et al in northwestern Rusk County by Humble Oil & Refining Company prior to the scheduled hearing at Austin is believed to be responsible for the company having cancelled its request for permission to take additional oil at Van. Humble Pipe Line Company completed middle December a 10-inch carrier from Van to the Louisiana-Texas border, where connection is made with the trunk line system of Standard Pipe Line Company, which in turn delivers to the 100,000-barrel refinery and tanker terminal of Standard Oil Company of Louisiana at Baton Rouge. The Texas unit of this recently completed trunk line passes within six miles of the Rusk County wildcat producer, and affords an attractive tieup for the above subsidiaries of Standard Oil Company of New Jersey. Humble Pipe Line Company has been pumping Van crude eastward since December 27, but in a limited volume, and has a large idle capacity.

An increased production allowance for the Van field is deemed necessary by operators in the near future, as the average daily production per well is being lowered as new wells are added. Latest proration gauges credited the field with 187 wells, with a combined daily flow of 371,450 barrels via 11/16-inch choke, or an average of 146.72 barrels daily per well. The above potential figures are believed to be about one-fourth of the open flow capacity of the field. Operators contend that continued reduction of daily withdrawls from the wells will have a harmful effect, because of peculiar conditions encountered. Widespread effect of oil drainage requires a steady development program on unitized acreage as well as on leases outside the unit block.

Twelve new locations were ordered drilled in the Van field during the past week, including eight that will be spotted on leases contributed by Pure Oil Company to the unitized block. Two of the new locations made on non-unitized acreage by Pure Oil Company are located on the south and southwest edges of the field. This company's R. A. Enas 1 is to be a south offset to Pure Oil Company's Wylie Enas 1, which is showing for a small producer and flowing oil by heads at 2936 feet, thus becoming the southernmost producer. Pure Oil Company's Mrs. N. R. Blake 1, located in the northeast corner of the 78.3-acre tract, J. Schmitz Survey, is a south offset to the same company's J. M. Martin 1. The latter was completed for a southwest extension of the field and the first on this side of the field to be drilled off the unit block, flowing 575 barrels daily by heads from sand at 2776-2968 feet.

DREADNAUGHT

DREADNAUGHT
MFG BY
BEAUMONT IRON WORKS
BEAUMONT TEXAS
U.S.A.

TUBING BLOCKS

THE Super Type Dreadnaught Tubing Block illustrated here is the answer to the industry's demand for an extremely fast block with A. P. I. Standard sheaves. It is Timken Bearing Equipped, the sheaves are of special electric nickel chrome alloy steel with high manganese content, and the balance throughout is so perfect that there is no tendency to tilt or turn at high speeds.

Alemite lubrication, with a grease reservoir in the sheave hubs, reached through the drilled center pin of special steel noted for its great strength.

Oversize construction throughout. Reinforced structural steel side plates. Guards easily removed. Bulletin on request, illustrating and describing our Regular Type Dreadnaught Tubing Block as well as this Super Type.

FRICK ·REID·

SUPPLY CORPORATION

Pittsburgh Pa. Tulsa, Okla.
. . . . . and Branches

New Mexico and Rocky Mountain Area

Small Offset Completion Sets Back Eunice Field

Hobbs, New Mexico.—The first setback sustained by the Eunice field in its bid to become the next important oil area in Lea County was registered last week when Shell Petroleum Corporation's O. L. Coleman 1, showed for a small producer after being shot with 100 quarts at 3974-99 feet, with a total depth of 4003 feet. This well is expected to make a 100-barrel producer when cleaned out. It is a south offset to Tidal Oil Company's Coleman 1, which was placed on production last August, and has yielded about 90,000 barrels of 34 gravity oil to date, with a current daily output of about 700 barrels natural.

Continental Oil Company and The California Company's A. E. Meyer 2, a west offset to Tidal Oil Company's producer, cored soft porous oil saturated lime at 3939-50 feet, followed by hard lime, lacking porosity at 3950-68 feet. It was deepened to 3993 feet, and early this week was flowing by heads. The same two companys' Meyer 1 is flowing an average of 775 barrels 34 gravity oil daily at 3995-4001 feet, while Lockhart 1-A is drilling lime formation below 3700 feet. Atlantic Oil Producing Company's Coleman 1, located on the north end of the field is drilling below 3500 feet. Getty Oil Company's State 1 is accounting for about 950 barrels oil daily through natural flow from lime at 4000 feet.

Low structural conditions logged by Landreth Production Corporation et al's State 1-C, located on the southwest edge of the prolific section of the Hobbs field, was reflected in the initial crude output. This outpost well is credited with flowing 10 barrels oil per hour by heads from lime at 4196-4221 feet, with three-inch tubing suspended in the hole at 4190 feet. It is located in the NEc NW Section 6-19s-38e, and about one-half mile south and west of the nearest production. The fact that it is a producer may force offsets by Vacuum Oil Company, Shell Petroleum Corporation and Atlantic Oil Producing Company.

Midwest Refining Company's Thorpe 11, C NE NW Section 10-19s-38e, is also making a small producer on the southeast side of the field, having failed to flow steady when swabbed in regular lime at 4125-90 feet. The same company's Turner 29, located at Hobbs, has cemented 8¼ casing at 4006 feet, with 250 sacks. This test is located more than three-quarters of a mile east of the nearest production, and passed up a 100-barrel 43 gravity producer in the Bowers sand at the 3200-foot level.

National Securities Oil Corporation's Linan 1, located about four miles west of the Hobbs field, developed more trouble last week when a string of tools were lost in hole after setting whipstock at 3826 feet to try and drill by junk lost at 3860 feet middle December. This wildcat is the most interesting test underway in Lea County, as it is logging key formations almost identical with those found in the Hobbs field, and has favorable prospects of developing production in the big lime. In northern Lea County, Galt-Brown Company's State 1 has measured up at 5127-7″ and abandoned. The Texas Company and Western Drilling and Engineering Company's A. S. Bridges-State 1-D, SEc NW Section 17-17s-34e, is drilling in hard gray lime at 4455 feet after landing 8¼-inch casing at 4400 feet.

New Mexico Governor Asks Increase in Daily Output

Santa Fe, New Mexico.—Governor Arthur Seligman has placed before the oil operators in the Hobbs pool his criticisms and objections to the proration agreement continuance which was signed Monday, January 12, by the state land commissioner, state geologist and oil operators.

Governor Seligman stated his objections then gave the oil operators 30 days in which to report back to him with a proposition to increase the minimum daily output under the Hobbs proration agreement. If the operators failed to do this he intimated that he would go before the legislature and ask for legislation which he "deems necessary to protect the interest of New Mexico."

The operators stated their side of the case telling the governor that proration was the only way in which operators without pipe lines can get their oil out. It was stated that Skelly Oil Company would shut down if proration was removed.

Shell Petroleum Corporation's representative stated that storage would cost 37½ cents per barrel to build steel storage tanks and 50 cents per barrel annually to maintain which with evaporation would render the oil valueless. He said the Hobbs pool could be closed without impairing the oil structure but that if the pool was opened up in 30 days the water would begin to flow.

He stated that Philips Petroleum Company and Shell Petroleum Corporation's casing head gas plants had been built at Hobbs only after the companies were assured that proration would be employed to the limit. He said that his company was at present putting out 25,000 gallons gasoline daily on which the state receives royalty but on which the company is not making money and that same is true of the Philips plant.

The operators permitted a rider to be attached to the agreement signed allowing the state to cancel at anytime but refused the governor's request that a definite minimum market outlet be promised.

Operators hold that the Hobbs pool is receiving a higher percentage of market outlet than the Oklahoma City pool or the Yates pool, New Mexico's nearest competitor. The Yates pool has twice the potential than the entire daily market outlet of the United States.

Land Commissioner James Hinkle pointed out that in his opinion if the pool were opened up the pipe line companies would take from only their own lands which are not state property and that then the state would be worse off on its royalties than now.

The governor indicated that another pipe line would be the solution to that but the operators stated that under present market conditions they could not see any other company logically coming in to build such a line. The governor said he felt sure the companies could find an outlet for more Hobbs oil if they desired to.

The matter is now in abeyance for the 30 days in which time the operators are to see if they cannot find some way to increase the Hobbs output. If they fail it will then be up to Governor Seligman to carry out his threat of going to the legislature for backing in his plan to get more royalties for the state through increased production.

Gulf Coast and South Texas Fields

JACK LOGAN, *Staff Representative, Houston, Texas*

Live Oak County Well Being Tested for Oil Production

Houston.—Houston Oil Company, hoping to establish the first commercial oil production in the Lucas gas field, Live Oak County, will set screen in its outpost test, Ross Boothe 1-A, located 3600 feet northeast of the established gas area in the M. B. Kiolin Survey, having encountered oil sand from 5270 to 5277 feet. This well, drilled originally to 5498 feet but recently sidetracked around 5100 feet to find the oil sand in the new hole, has been put down to replace the same company's Ross Boothe 1, which gave first indication of the deep oil sand but which was lost through mechanical difficulty. That first well, Boothe 1, showed 300 feet of 50 gravity oil in 12 minutes on drill stem test at 5252-57 feet, and the oil sand was identified as being of the same as the regular oil horizon in the original Pettus pool of Bee County. Boothe 1-A is reported to be lower on the structure than Boothe 1.

Houston Oil Company's Cartwright 22, located immediately east of the Lucas field gas production, has drill stem stuck at 6023 feet, and efforts will be made to shoot it loose. This test, deepest of the area, tried to blow out from 5420-25 feet and again from 5840-5850 feet. Houston Oil Company is also active on two other locations in Lucas field, Brown Land & Cattle Company 3 in the northwest corner of the M. B. Kiolin Survey drilling sticky shale at 1585 feet, while No. 4 near the southwest corner of the same survey has spudded.

Jacobs, Bussini, Pickett et al's Kay 1, five miles east of George West in Block 26 of Marbach land in Bridgett Faddin Survey, Live Oak County, is drilling shale at 2523 feet. Tul Tex Oil Company's Jacobs 1 in Section 3, G. H. & H. R. R. Survey, Abstract 206, showed 23 fourbles salt water in six minutes on drill stem test at 3120-3123 feet, and the test has been abandoned.

Refugio Flank Deep Well Ready for Fourth Test

Houston.—Houston Oil Company's Rooke 1-B, interesting deep test on the southwest flank of the structure at Refugio, was preparing to make a fourth attempt at obtaining satisfactory drill stem test, oil showing sand having been encountered from 6186 to 6194 feet. This well is several miles southwest of Refugio. Should it develop production it would constitute the first productive deep well on the flank of the field, although it was on nearby acreage that the discovery well of the 3700-foot oil horizon was completed.

The only other deep production on the extreme south edge of the field is that of Moody-Seagraves Producing Company's St. John 1-A, originally a 400-barrel well at 5490-5500 feet, located three miles east of the Houston Oil Company test, and over a mile south of the regular deep production of the east side of the field.

There were five completions the past week at Refugio, all in the 6500-foot horizon. Moody-Seagraves Producing Company's and Independent Oil & Gas Company's J. F. B. Heard 1-C, located south of the southwest corner of the townsite, not far south of the 3700-foot wells of the townsite area, came in flowing 350 barrels 52 gravity pipe line oil daily at 6432-43 feet. Houston Oil Company's Tom Heard 1, Block 16, came in flowing 250 barrels 50 gravity pipe line oil daily at 6449-62 feet, and the same company's Fannie Heard 2-A began flowing 600 barrels 40 gravity pipe line oil daily at 6443-6462 feet. The Texas Company's Sheldon 2, a workover, came in at 6612 feet with 2300 pounds working pressure, making dry gas, but later began yielding around 100 barrels gasoline daily. This well is somewhat northeast of the regular townsite area. Union Producing Company's Mitchell 3, a former producer at 5500 feet, came in flowing 525 barrels oil and same amount of water daily from 6437-6451 feet.

Duval County Offset Well Strikes Oil at 2250 Feet

Houston.—Magnolia Petroleum Company's Wilson 1, Survey 136, Duval County, an offset to Frasher & Schoolfield et al's semi-wildcat oil producer in Section 135, encountered oil sand at 2244-50 feet and has set 8¼-inch casing at 2244 feet. These wells are about 1½ miles southwest of the Schoolfield-O'Byrne pool.

The producer of Frasher & Schoolfield et al logged the oil sand from 2303 to 2308 feet, and it was recently reported flowing 1000 barrels of 22.2 gravity pipe line oil daily through a ⅝-inch choke and two-inch tubing. The Schoolfield-Frasher interests are reported to be starting work on their No. 2 approximately 1000 feet south and west from the discovery well.

Buchanan et al's Welder-Wood 1, located eight miles northeast of the Schoolfield-O'Byrne pool in Survey 215 of Duval County, tested sand from 1523 to 1529 feet showing salt water with slight trace of oil and it will probably be abandoned.

Vacuum Oil Company was drilling January 13 in shale at 2581 feet in its wildcat Duval County Ranch Company 1-A, which is located in Section 280, northwestern Duval County, nine miles northwest of the Schoolfield-O'Byrne pool and about five miles southwest of the wildcat producer of S. R. C. Oil Company and Vacuum Oil Company in Section 293. The Vacuum Oil Company wildcat has had only one interesting showing, a sand at 1703-1723 feet which showed a slight trace of gas. Contract for the drilling of this test calls for minimum depth of 3800 feet unless production is previously found.

Ray-McKinney Pool is Extended 1000 Feet East

San Antonio, Texas.—An extension of 1000 feet east to the Ray-McKinney or discovery pool of the Pettus area, Bee County, seemed apparent last week when Union Producing Company's Ray 26, 1000 feet due east of the same company's No. 14, struck the pay at 3941 feet, about the same depth as No. 5 and No. 14. The well was drilled 10 feet deeper into the stratum and the casing set on top of the formation without taking a drill stem test.

Ray 5 made an initial production of 1950 barrels, second

highest initial flow in the field. That gauge was on a 9/32-inch choke. Ray 14 made 576 barrels initially on a 3/16-inch choke.

The showing brings other territory to the east into the spotlight and indicated a possibility of the fields extension into Goliad County. In Goliad County the company is setting 10-inch surface casing at 435 feet.

Exact location of the Ray 26 is 2500 feet from the south line and 2000 feet from the west line of the Pierce Miller survey.

The Cosden pool, three miles west of Ray 26 and across the Pettus townsite, again receives activity with Barnsdall Oil Company preparing to drill a second well on its Roberts lease. Roberts 1 is the most southeasterly of the producers in the Cosden district and is more or less between the main Pettus pool and the extension. The first Roberts test gauged 343 barrels on a 5/8 inch choke. The test will be watched with much interest.

The new Simms field, which has one producer gauging 56,000,000 cubic feet of wet gas at 3542-52 feet, is in line for its second well. Simms Oil Company set 8¼ inch casing at 3778 feet in its Holzmark 2 and is preparing to complete. It was drilled to a total depth of 4458 feet to test lower formations. This well is located about five miles southwest of the Nichols pool and is in Bee County.

The deepest well in the county at this time is the one being drilled by Moody-Seagraves Producing Company and Independent Oil and Gas Company on the Welder lease about eight miles southeast of Beeville. It is down approximately 4865 feet.

Three New Wells Reported For Zapata County Fields

Laredo, Texas.—Three new producers and three locations were reported in the Zapata County fields during the week ending January 8. The new producers made an initial flow of 150 barrels of oil and 30,000,000 cubic feet of gas.

O. W. Killam completed Cuellar 36-B, Survey 277, Cuellar pool, for 75 barrels of oil daily on pump at 1596 feet. His No. 37-C, Survey 278, same pool, made 75 barrels at the same depth.

Norden and Morris' Pedro de los Santos 1, Share 6, Fansler partition of Comitas grant, Muckelroy pool, made 30,000,000 cubic feet of gas at 1373 feet.

O. W. Killam made all three of the new locations. His Killam 2 in Survey 182 of the original Mirando Valley pool, his Cuellar 38-B, Survey 277, and Cuellar 39-C, Survey 278, Cuellar pool, are to be drilled immediately.

Second Oil Producer in Saxet Area Anticipated

San Antonio, Texas.—The second oil producer in the Saxet area, five miles west of Corpus Christi in Nueces County, is in prospect with preparations being made to drill in the Houston Oil Company's Hunter 1, which logged a saturated sand at 4066 to 4079 feet. Nine and five-eighths inch casing has been set at 4066 feet.

Saxet Oil Company's Dunn 6 made several hundred barrels of 23 gravity oil initially at 4290 to 4304 feet, and that company's Donigan 1, also in this area, made a gasser at 4079 feet which showed a trace of oil.

Another well that is being watched with much interest in this particular area is Moody-Seagraves Producing Company's Smith 1, which made a gasser at 4088 feet, but which is being killed to reset coarser screen. Field men are having considerable trouble due to the tremendous gas pressure.

Saxet Oil Company's State National Bank 1, also in the Saxet area of Nueces County, is preparing to drill in after recementing. The test first drilled in at 2452 feet, but the cement failed to hold and the job had to be done over again.

Second Test Planned for Cooksey, Taylor Marl Pool

San Antonio, Texas.—The Cooksey area, a Taylor marl pool opened October 16, 1930, 11 miles east of here by Penn Oil Company, is to receive another test. It is the Cooksey 2, located 400 feet northwest of the discovery well.

The Cooksey 1 pumped 77 barrels of 35.8 gravity oil and seven barrels of water during the first 12 hours on the pump. After the head was completely removed, the test settled down to about 40 barrels daily of pure pipe line crude.

The exact location of the new test is 1450 feet from the east line and 250 feet from the north line of the 80-acre tract in the Rialls survey No. 11. It is about four miles from the Wilson County line.

The discovery well topped the marl at 1410 feet and was drilled a total depth of 1461 feet. Casing was set at 837 feet.

A second well was drilled on the Dan Kosub 175-acre tract, one-fourth mile northeast of the discovery test. It failed to make a commercial producer at the marl level and was carried to the Edwards lime at 2234 feet. It was drilled to a total depth of 2259 feet, where it was abandoned.

These wells are located on a 1370-acre unitized block, part of a 10,000-acre drilling block owned jointly by Sun Oil Company and Penn Oil Company for the past three years. Those participating in the unit are the Penn Oil Company, Sun Oil Company, Magnolia Petroleum Company, C. L. Witherspoon, Jake Jarmon and J. D. Collett.

The nearest production to this well is the Dobrowolski pool, producing both oil and gas in a 600-700-foot sand. This pool is about five miles to the southwest. The producer in the Cooksey area is the deepest in the county, those in the Somerset area being several hundred feet shallower.

Plug Back San Patricio County Well to 4903 Feet

San Antonio, Texas.—Saxet Oil Company is attempting to make a producer in its Rachel 17 at a total depth of 4903 feet, after drilling to a total depth of 6000 and failing to get additional production. The test is located in the White Point field of San Patricio County, across Nueces bay from Corpus Christi.

The well originally made a producer at 4872-4892 feet, yielding about 85 barrels of high gravity oil and about 20,000,000 feet of gas for several weeks. The failure of the well to increase its oil flow prompted owners to kill it and drill deeper.

After plugging the test back to 4903 feet 22 feet of screen has been set and preparations are being made to swab it back in.

The well is located near the center of the proven gas area and about at the top of the structure, which accounts for the high gas pressure. It is believed that the sand will prove rather prolific if wells are drilled lower on the formation.

This well's log will be of considerable value in drilling future tests. At least, it is the key to further oil production in the area, it is believed.

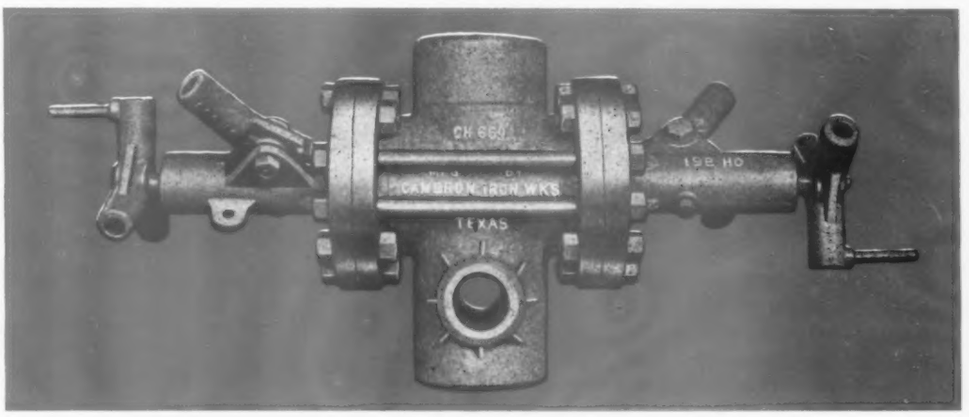
Tubed...

against pressure!

3 of world's deepest producing wells

made possible by

C·I·W Tubing Control Heads



Manually operated C. I. W. Tubing Control Head, heavy duty model, of the type used at Big Lake. Late models, for tubing snubbing work, are pressure operated through a central control manifold

To comply with State Railroad Commission orders, three of the world's seven deepest producing wells in the Big Lake, Texas, field have been successfully tubed against pressure. The job was made possible, entirely safe, and absolutely certain of success by Cameron Iron Works Tubing Control Heads, heavy duty type.

Completion of this work without interrupting production, or wasting any gas or oil, again demonstrates that methods and equipment for tubing high-pressure wells have been thoroughly perfected. The latest equipment in fact, (C. I. W. Pressure Operated Tubing Snubber) is so advanced that regular roustabout gangs, without the assistance of special crews, can easily tube the highest pressure wells, regardless of depth. Well pressures are used to operate all units of the C. I. W. Pressure Snubber; the only work done manually is making up tubing.

If you'd like to be fully posted on the latest equipment and practice pertaining to tubing high pressure wells, write or send in the attached coupon. As pioneers and specialists in the development of high pressure tubing control heads and snubbing equipment, we'll gladly furnish you with full information.

CAMERON IRON WORKS, INC.,
Houston, Texas.

Gentlemen:

Without obligation, I will be glad to have you furnish me with information on the latest equipment and practice pertaining to tubing high pressure wells.

NAME .....

COMPANY .....POSITION.....

CITY .....STATE.....

Cameron Iron Works, Inc.

Houston, Texas

Extensive Wildcatting Along Edwards Plateau in Prospect

San Antonio, Texas.—An extensive wildcatting campaign between the prolific fields of West Texas and the Balcones Fault pools along the lower Edwards Plateau is likely to result from the recent interesting strike of L. L. Evans and Walter Gant in Kerr County. Their wildcat, Jeff Love 1, located five miles west of Kerrville, is showing up for a small commercial producer in a sand at 3374 to 3391 feet.

On January 8, it was reported that a total of 490 barrels of oil had been pumped into the tanks, representing the entire production to that date. It has been averaging around 38 to 45 barrels of oil daily, which represents about one-fifth of the amount of fluid pumped from the hole.

The importance of the strike, however, is not particularly in the amount of production from this test as it is in the indication of production along the lower part of the Edwards Plateau, just about the Balcones escarpment. The well is 100 miles from the nearest oil production, that being the fields of West Texas to the north, the Luling, Salt Flat and Darst Creek fields along the Balcones fault zone to the east, and the Mirando and Maverick County fields to the south.

Already a number of locations have been announced and several wells are being drilled in this section, largely as a result of the Kerr County strike. Prior to this time there has been no real deep testing done in the Kerrville area. Several wells have been drilled in Kerr, Edwards and Real County, none of which reported any particular favorable indications. Blanco County has several wells drilling at shallow depths, while Kendall County recently received two wells to about 2500 feet, neither finding commercial production. Others are being drilled in the county at comparatively shallow depths.

In Real County, about four miles northwest of the Love test, Evans and Sprinkle are down nearly 200 feet in Marcus Auld 1, located in Section 15, Block D, C. C. S. D. and R. G. N. G. Railway Company Survey. These same operators' Haby 1, formerly the McGinley Corporation's test, in Section 175, A. B. and M. Survey, seven miles southwest of the Love well, is preparing to run 15¼ inches surface casing at 330 feet. It also is located in Real County.

Plan New Test

Evans and Gant, owners of the Love test, are preparing to rig up their Sieker and Mears 1, in Section 1605 of Kerr County, three miles to the northwest of the producer. It is reported that they will drill another in the vicinity, although definite announcement of the location has not been made.

An interesting announcement comes from Bandera County, adjoining Kerr County on the south, where Permian Oil Company, Coleman will start drilling a test in the near future. The well is to be located on Red Bluff creek in the eastern part of the county, about 12 miles from Bandera. It will be on the Taylor ranch, formerly known as the old Stevenson ranch. The well is scheduled to be drilled to 4000 feet unless production is found before reaching that depth. Another well is reported to be planned north of Medina in that county, just south of the Kerr line. The exact location however, has not been made officially.

The outcome of the Love test is not definitely known, as no full 24-hour gauge has been available to date. It has been shut down numerous times since the first pumping tests were started on January 2. After reconditioning the pumping equipment, which allowed the well to stand for some time, the well in 10 hours, January 7, pumped 60 barrels of oil and about 200 barrels of salt water, it is said. The general average for the period did not exceed 38 barrels daily.

The exact location of the well is 1320 feet from the west line and 650 feet from south line of Section 1594, C. C. S. D. and D. G. N. G. Railway Survey, southwestern Kerr County.

The well has been more or less in the spotlight since November 1, 1930, when it struck a sand at 2544 to 2547 feet, which yielded two barrels of light green oil testing 39.6 gravity at temperature of 70 degrees. It was then deepened to 2563 feet in a black shale and then shot, but no increase was obtained.

The test resumed drilling, striking a second prospective sand at 3374 to 3391 feet. The well was shut down on November 18 to make preparations for a test. Work was resumed on November 20 and had a gas blow-out shortly afterwards, igniting from the bit dresser's furnace. It ran wild and burned several hours, resulting in the need of rebuilding the rig and fishing for a portion of the cable. Following the completion of the fishing job, 6⅝-inch casing was set at 3368 feet.

Efforts to reduce the water in the test by plugging back 2½ feet apparently have had an effect on the gas and oil, as is indicated by the present output. It swabbed several hundred barrels of oil and about three times as much water in a short period just before being placed on pump, but a great deal of this likely was the accumulation while the well was shut down over the Christmas holidays.

Two Wells Completed and Two Abandoned at Wanette

Tulsa.—Gypsy Oil Company's Horn 3, SE NW NE Section 23-6n-3e, Wanette pool, produced 945 barrels from 21 feet of sand topped at 3390 feet. It was drilled one foot through the sand at 3412 feet and a six-inch perforated liner set at 3400 feet. Last gauge showed 1115 barrels during the 24-hour period after which it was shut in for proration requirements.

Deep Rock Oil Corporation's Gibson 5, NE SW NE Section 23-6n-3e, south offset to Gypsy Oil Company's Horn 3, had top of the sand at 3390 feet and produced 1013 barrels during the first 24 hours. Total depth is 3413 feet.

Donohue and Pearson's Farley 1, NE NE NE Section 25-6n-3e, location announced last month, has been abandoned. Magnolia Petroleum Company's Jones 1, NE NE NE Section 27-6n-3e, one-quarter mile south of production, had top of the Simpson Dense at 4405 feet, top of the dolomite at 4458 feet, and was drilling in dolomite at 4505 feet when 3800 feet of drill pipe was lost in the hole. This test had only a small amount of sand in the "Wanette Horizon" and no important shows of oil or gas. It is being abandoned.

Santa Barbara, Calif.—Standard Oil Company has been unable to free the drill pipe in Gerber 1, a wildcat test at Point Concepcion, and will plug back to test upper showings. The well was drilled to 6820 feet and nearly 1000 feet of drill pipe remains in the hole. This test cut streaks of oil sand above 5000 feet, but a production test failed to develop commercial production. Intermediate showings will be tested, pending possibility of deeper drilling if the drill pipe is recovered or sidetracked. The well might be called the terminus of a long series of tests along the coast line, a few of which have proven productive, and many of which have been abandoned.

News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

Curtailment Violators Face Losing Market Outlet for Oil

Los Angeles.—Inauguration of a plan which calls for the purchase at a fair posted price of all oil produced under curtailment is expected to aid the drive to reduce California's net output to 500,000 barrels. Under provisions of the arrangement, operators who bring their totals down to the accepted levels will be met promptly by purchasing companies, while those who deliberately produce more oil than their percentage of the total, which is normal market requirements, may find themselves unable to dispose of any of their output. In arriving at a decision to purchase all of the oil that the market will stand and no more, the principal purchasing companies believe that they are adopting a sound economic policy which will discourage overproduction.

Several weeks ago announcement was made that the curtailment plan might ultimately lead to a division of purchases. Major companies have been aware of the fact that as long as all oil produced is purchased, the tendency to overproduce is more pronounced. This is a significant factor because most of the oil has been purchased at a regular posted price, with the exception of Playa del Rey.

Ultimately the price of petroleum products rises or drops in accordance with demands, making for both a weaker refined and crude market structure after a period of overproduction. The purchasing of only as much oil as consumption justifies is considered fair to all concerned. Obviously, willingness of purchasers to take more oil than they can hope to dispose of is suicidal ultimately to both the producer and purchaser.

California production has dropped to around 535,000 barrels, or 35,000 barrels above the base allotment. This excess may largely be charged to Playa del Rey, Long Beach and Santa Fe Springs. Operators in the Playa del Rey field have been assured that they will have no trouble in disposing of their oil at a fair market price if they will accept the reduction suggested by the curtailment committee.

Major oil companies are considering the purchase of Del Rey Oil & Refining Company's pipe line gathering system in the Playa del Rey field, in order that the haphazard methods of disposition may be eliminated. It may be possible for the small operators to get as much money for the allowable production as for almost twice the amount under a "catch as catch can" policy now in force.

Most of the Playa del Rey operators have agreed to reduce production and receive the posted market price for their crude, but are prevented from doing so by the state overproduction. Principal purchasing companies want to make sure that the output is down before they offer regular contracts.

Every operator in the North Belridge field but Belridge Oil Company has agreed to operate only one each. This means that not more than 10 wells will be produced at one time, unless Belridge Oil Company sees fit to operate several producers. This company is now producing the discovery well at the rate of 4000 barrels daily. A production of more than 15,000 barrels daily is not anticipated in this field, and the total may fall far short of this figure.

CALIFORNIA PRORATION SCHEDULE
JANUARY 1931

	January Potential B/D	Per Cent Curtailment	Jan. Allotment B/D	Dec. 16-31 Production B/D
Belridge	8,500	55.59	3,775	5,585
Brea-Olinda	23,670	55.26	10,500	10,340
Capitan	1,200	98.33	20	.....
Coalinga	33,500	73.13	9,000	8,500
Dominguez	15,220	34.95	9,900	9,865
East Coyote	3,730	57.10	1,600	1,595
Elk Hills	29,650	53.96	13,650	15,500
Elwood	106,000	72.65	29,000	30,745
Fruitvale	9,170	71.59	2,500	2,630
Huntington Beach	44,440	54.25	20,330	22,350
Inglewood	22,330	28.35	16,000	15,765
Kern Front	20,250	53.58	9,400	8,995
Kern River	10,900	74.77	2,750	2,555
Kettleman Hills	67,690	66.72	22,500	22,020
Lawndale	350	28.57	250	295
Los Angeles	1,400	....	1,400	1,375
Long Beach	201,465	54.32	92,020	94,875
Lost Hills	6,500	94.92	320	310
Maricopa Flat	12,000	53.35	5,600	7,155
McKittrick	4,580	21.40	3,600	3,675
Midway-Sunset	92,100	44.32	50,000	48,930
Montebello	9,150	21.31	7,200	7,485
Mount Poso	22,575	62.35	8,500	8,260
Newport	30	....	30	30
Playa Del Rey	48,245	57.18	20,660	39,350
Potrero	1,800	54.17	825	1,715
Richfield	14,930	54.25	6,830	6,750
Rincon	3,000	65.00	1,050	2,420
Rosecrans	9,020	55.32	4,030	5,560
Round Mountain	13,200	99.55	60	60
Santa Barbara	515	70.87	150	150
Santa Fe Springs	137,500	53.45	64,000	79,650
Santa Maria	12,000	79.18	2,500	2,555
Seal Beach	35,585	54.24	16,285	16,635
Summerland	250	....	250	255
Torrance	12,455	51.24	5,700	7,845
Ventura Avenue	96,750	50.98	44,500	45,455
Ventura-Newhall	6,200	54.84	2,800	4,665
Watsonville	60	....	60	60
West Coyote	11,530	26.28	8,500	8,680
Wheeler Ridge	590	....	590	595
Whittier	1,450	13.78	1,250	1,385
Others	110	77.27	25	50
Total	1,151,500	56.58	500,000	552,670

This schedule gives effect to the state allotment of 500,000 B/D which became effective December 18, 1930. The January potential shows a decline of 16,000 B/D under that of December. The actual production for the last half of December shows a decline of 52,080 B/D under that of November.

Playa del Rey Production Below 40,000 Barrels Daily

Los Angeles.—A decline in the number of completions at Playa del Rey and likelihood that wells finished in the future will average less than 400 barrels have further assured a steady decline in production, barring unexpected developments in the deep zone, which has been responsible for far less than half of the production to this time. A large completion two weeks ago has been used as an argument that the deep zone has not received a fair test, but this formation admittedly has proven more productive on the flanks than near the center of the field. Production staged a steady climb until the peak of a month ago, but the maximum figure gave way rapidly when completions failed to offset the natural decline. The output has flattened out below 40,000 barrels but the trend is definitely

lower. Curtailment probably will step in to force a still more rapid reduction than would normally be registered. Few new locations have been made during the past two weeks and the number of drilling wells will taper off steadily.

An operating crisis among the small companies has been predicted, with failure to complete a good percentage of the wells started, small initial yields and other problems aggravating field development where work has been done on limited capital. The tail end of a townlot drilling campaign never fails to take a heavy toll among small operators, and Playa del Rey probably will be no exception.

Average production of both the shallow and deep zone producers does not point to a revival of an upward trend, even if the deeper formation does yield a number of fair producers. Edge completions in this sand have been better than those on top of the structure, due either to a thinning out of the producing zone in spots or a greater penetration on the dips.

Ohio Oil Company's Gun Club 4, completed 10 days ago with an initial flow of 2600 barrels, has shown a nominal decline, but its location is almost equivalent to an original completion. This part of the field has seen no intensive development and a good well is not a distinct surprise. The discovery well was completed on this tract more than a year ago and is still flowing some oil from 6200 feet. This block will be conservatively developed and stands a good chance of returning a fair profit to its owner.

Only two wells were completed during the week, as against six during the previous week and an average of 10 during a four-week period. The deep zone displayed a weakness in a completion well up on the structure and possibility of a new flood of oil from this formation is considered remote.

The percentage of idle wells has increased and inactive projects may turn the tide of development sharply downward on short notice. One small company has four idle drilling wells, while several operators have two idle tests.

Weed Patch Discovery Well Has Shown in Temblor Sand

Bakersfield, Calif.—Shell Oil Company is reliably reported to have found the Temblor zone at 6800 feet in Porter Day 1, discovery well in the Weed Patch field which was killed after a production test at about 5750 feet. Cores showed oil and gas and the discovery probably will rank among the important developments of the year. The Weed Patch field is located out in the San Joaquin Valley and in line with the Fruitvale and Union Avenue structures, but out of line with the fields producing along the fringe of the valley.

Los Angeles.—E. K. Allison Syndicate has passed a depth of 4000 feet in Baldwin Hills 1, a deep test in the Inglewood field, having encountered several streaks of oil sand below 3600 feet. A production test was not justified, however, and more hole will be made. The Inglewood field has already been proven for deeper production and is regarded as potentially one of the richest fields in the Los Angeles basin.

Bakersfield, Calif.—Kettleman Lake View Oil Company has succeeded in shutting in Now 1, Section 11-23-19, a wildcat in the Tulare Lake district which recently blew out from 1285 feet after tapping a high pressure dry gas pocket. Several previous blowouts had been recorded in the district, which has produced limited quantities of dry gas for years.

Coal Oil Point Ocean Well Shows Unfavorably on Test

Santa Barbara, Calif.—Perhaps the outstanding disappointment of the week was failure of Bolsa Chica Oil Corporation's Tideland Permit No. 191-1, an ocean test off Coal Oil Point which flowed water and some oil during a production test of the Vaqueros zone at 4191 feet. The well started flowing without swabbing at a 1500-barrel rate, but it was soon evident that the test was wet and the fluid failed to clean up. The water cut ran high and indications pointed to bottom water. The tubing pressure was negligible and the casing pressure about 360 pounds.

The well had been plugged back from 4191 feet to 4155 feet in an effort to eliminate possibility of bottom water, but the plug evidently failed to hold or was not set high enough to exclude all streaks of water sand. The Vaqueros zone was found at 4020 and a high gas pressure developed immediately below this point. A string of nine-inch casing was cemented at 4020 feet. The rich oil sand started at 4070 feet and continuous coring showed an almost unbroken body of oil sand and rich shale to 4150 feet. Cores from below 4060 feet showed questionable streaks of sand and it was deemed advisable to plug back for the production test.

This ocean test has been the center of wildcatting interest for more than a month and promised to open up a new oil field—the first ever found entirely outside the mean high tide line—but the production test has at least temporarily removed the structure as a production factor in California. The well is located about 900 feet out in the ocean and on a steel pier which ends in 16 feet of water.

Failure of the test does not condemn the structure and commercial production is altogether a possibility if the bottom water can be shut off. The fact that the well started flowing without the customary swabbing is regarded as important. Wells in the Elwood field also produce only a small amount of gas, but respond with a large flow of oil. Indications point to a low-gas-oil ratio on this structure, although the casing pressure was sufficiently high.

The late Irving Augur, former president of Bolsa Chica Corporation, first conceived the mapping of the structure and engaged J. E. Eaton to do the geological work. The structure proved to be closed but was found to lie entirely outside the mean high tide line. Number 191-1 was located near the top of the structure, which may be reached by pier only from Coal Oil Point. The coast line curves gently to the south from a point near the Elwood field to form a point which makes the anticline accessible through pier building. The company controls nearly all of the structure through the medium of permits, the state concession on which the first well was drilled embracing 155 acres.

Belridge Test Seeking More Sand After Coring 200 Feet

Bakersfield, Calif.—Richfield Oil Company is drilling at 6550 feet in Belridge 1 and will not make another production test until a greater thickness of oil sand is cut. A string of nine-inch casing was cemented over the Temblor zone at 5580 feet, but only a small part of the formation below the shutoff has been oil sand. All told, about 200 feet of oil sand has been cored, with streaks of questionable sand scattered at irregular intervals. A water shutoff was not obtained and fluid in the hole probably has retarded the identity of some of the formations.

Rio Grande Oil Company, after abandoning Garcia 1 a

Major Oil Companies Have Lead in Drilling Decline

The fact that there is said to be much drilling during these troublesome times leads to the question of who is responsible for this over-development. A survey of the wells actually drilling at the beginning and end of last year in the four leading oil producing states brings to light some interesting information that has an important bearing upon this question. The figures show that there has been a material decline in the number of drilling wells in these four states, while the evidence shows, unmistakably, that the major companies have led the decline in new developments.

The accompanying table presents some timely information concerning the drilling status within the states of Oklahoma, Kansas, Texas and California, showing the number of wells actually drilling at the beginning and end of last year, divided as to major companies and small companies and individuals. It will be noted that there was a decline in the number of drilling wells during the past year of 724 operations within the areas for which this information was obtained. Of this total decline, the major companies have effected a curtailment of 478 wells while the small companies and individuals have only reduced the number of drilling wells to the extent of 246. On a percentage basis, this data shows that the major companies have retarded their drilling operations 55.32 per cent, while the small companies and individuals have reduced drilling to the extent of 15.87 per cent. It is apparent from these figures that the small operators have not effected the same degree of curtailment in new development that is indicated by the results shown by the major companies.

Analysis of drilling operations on a percentage basis for each of the areas included in this survey shows that the small operators are responsible for a greater part of the drilling being done at this time. In fact, in some instances, it is shown that the relative rate of drilling has been increased by the small operators while the rate indicated by the major companies has declined. This is evident in the case of Oklahoma, Kansas, California and certain districts of Texas, such as Southwest Texas and the Texas Gulf Coast. At the beginning of last year, wells drilling in the areas of Oklahoma covered by this survey indicated a proportion of 43 per cent credited to major companies and 57 per cent to small companies. At the end of last year, the relationship changed from only 20 per cent of drilling wells credited to major companies, against 80 per cent by small companies and individuals. Similar changes are shown in other areas, as indicated by the facts presented here.

Picture Not Complete

While the foregoing information is of especial significance to the industry at this time, it should be realized that these figures do not represent a complete picture of the drilling situation within the areas covered. Only in the report for Texas, which is given by districts and for California, are the figures conclusive; those for Oklahoma and Kansas representing only the operations within specific districts where complete data was available. In fact, it can be stated that the number of wells actually drilling in Oklahoma represents an unknown quantitiy and the total for that state is impossible to obtain. In each instance, however, the drilling data was obtained from authentic field reports within the areas covered.

Some idea of how the major companies have curtailed drilling during the past year can be obtained from the following tabulation:

Partial List of Drilling by Major Companies

	Beginning of 1930	End of 1930	Decrease
Oklahoma—			
Amerada Corporation	13	1	12
Carter Oil Company	21	4	17
Gypsy Oil Company	24	4	20
Indian Territory Illuminating Oil Co.	107	16	91
Magnolia Petroleum Company	49	13	36
Sinclair Consolidated Oil Companies	23	2	21
Kansas—			
Empire Gas & Fuel Company	7	1	6
Prairie Oil & Gas Company	10	1	9
Texas—			
Humble Oil & Refining Company	36	22	14
Magnolia Petroleum Company	18	16	2
Texas Corporation	27	17	10
Phillips Petroleum Company	6	4	2
California—			
Standard Oil Company	58	20	38
Texas Company	26	4	22
Union Oil Company	37	8	29
General Petroleum Corporation	55	8	47
Shell Petroleum Company	42	26	16

Drilling Status

	—Wells Drilling— January 1, 1930			—Wells Drilling— December 1, 1930		
	Majors	Small Co.s and Individuals	Total	Majors	Small Co.s & Individuals	Total
Oklahoma	372	488	860	101	410	511
Kansas	53	159	212	25	126	151
Texas	186	598	784	171	475	646
California	253	305	558	89*	293*	382*
Total	864	1550	2414	386	1304	1690
Percentage	36	64	100	30	70	100
Percentages for Areas Covered						
Oklahoma	43	57	100	20	80	100
Kansas	25	75	100	17	83	100
Texas	24	76	100	27	73	100
North Cent.	10	90	100	9	91	100
East	26	74	100	44	56	100
West	30	70	100	39	61	100
Panhandle	23	77	100	40	60	100
Southwest	34	66	100	16	84	100
Gulf Coast	36	64	100	30	70	100
California	45	55	100	23	77	100

* December 31.

---

week ago, has skidded the ring and will drill Fay 1 near the center of Section 18-20-22. The original well was abandoned at 3680 feet because of mechanical difficulties, after cutting thin streaks of oil sand and shale.

Belridge Oil Company's discovery well is flowing above 4000 barrels of 45 gravity oil, having increased its production from 2750 barrels. This well ushered in the Temblor zone as a producer in the North Belridge field and was responsible for the dozen wells now drilling for the deep zone.

Louisiana--Arkansas Field Notes

Zwolle Has Two Extensions, Two Locations During Week

Shreveport.—New locations for North Louisiana during the week ending January 10 totaled but two, both being for the Zwolle field in Sabine Parish. Both are in the 1½-mile south extension of the east Zwolle field.

Two slight extensions of this part of the field were made during the week. A quarter of a mile east of production Towery Drilling Company's Sabine 1, NW NW Section 12-7-12, was completed at 2436 feet pumping 170 barrels of oil daily. Slightly over half a mile north H. W. Perritt's Bowman-Hicks 1, SW NE Section 2-7-12, which has been showing much oil, was completed flowing 50 barrels through two-inch tubing from total depth of 2288 feet. One of the new locations was Perritt's Bowman-Hicks 3, in the same section, offsetting this producer.

One and one-fourth miles northeast of the four producers in Section 14-7-14, which comprise the original Zwolle field or Blue Lake district, R. L. Gay, Trustee, abandoned the second of two tests as a salt water hole. Both wells showed oil in the Zwolle chalk but not of commercial quantity. The abandoned test is Bowman-Hicks 9, NE SW Section 18-7-13, which topped the Blossom sand at 2697 feet and was abandoned at 2717 feet in sand. The nine-mile gap between Blue Lake and Zwolle townsite production is now left without a single drilling test. All tests drilled in this non-productive gap to date have been failures.

Magnolia Petroleum Company spudded Lucius 1, Section 2-3n-12w, in south Sabine Parish, a rank wildcat, and set 13⅜-inch surface casing at 204 feet. Late last week it was drilling shale at 400 feet. This test should throw considerable light on a comparatively recently advanced theory that the Sabine Uplift extends southward from Sabine Parish in to Vernon Parish.

Caddo and Claiborne Parish Tests Attracting Interest

Shreveport.—Two of North Louisiana's 5000-foot tests were watched closely during the week ending January 12. Texas-Louisiana Pipe Line Company was arranging to test Monday, January 12, in French 1, SW NW Section 34-23-16, Rodessa district, northwest Caddo Parish, where 15 feet of broken sand and sandy lime were encountered with a trace of oil, total depth being 5522 feet in the upper Trinity. This test is 1800 feet east of the discovery well of that field completed last summer at total depth of 5506 feet as a 12,000,000-foot gasser, being North Louisiana's deepest commercial well. French 1 is the first test drilled since the gasser was completed. The gas in the discovery well was found in a similar formation. Elevations of the two wells are the same, 230 feet; seven-inch casing in French 1 was cemented at 5102 feet.

Prairie Oil & Gas Company on Monday, January 12, was drilling shale at 4810 feet after failing to geat seat for drill stem to make a test of 30 feet of broken sand from 4668-98 feet, in Shackelford 1, SE NE Section 30-23-5w, a wildcat in northeast Claiborne Parish. Contract depth is 5000 feet. Louisiana Oil Refining Corporation drilling a 4500-foot test in the same parish in Langston 10, Section 19-21-7w, cemented 9⅝-inch casing at 2438 feet.

Harry I. Morgan and Shreveport-El Dorado Pipe Line Company deepening Kendricks B-10, Section 22-19-11, Bossier Parish, Bellevue district, after completing an offset, was completed in a new sand stratum of the upper Trinity at 1840 feet, tested salt water through drill stem at 1829 feet and was drilling ahead below 1841 feet late last week.

S. P. Borden and associates, while bailing Thomas 1, a wildcat in Section 27-16-9w, Bienville Parish, at total depth of 4875 feet, lost the bailer after bailing down 1000 feet and later lost part of the drill stem and now has a fishing job.

Louisiana Gas & Fuel Company abandoned Saunders 2, Section 42-8n-10e, a wildcat in Concordia Parish, as a salt water hole at total depth of 1528 feet.

Second Jackson Field Test Shows for Oil Production

Jackson, Miss.—Another well in the Jackson field, Millstein Oil & Gas Company's Gammill-Hartfield 1, SW SE Section 6-5-2e, Rankin County, a half mile northeast of nearest gas production, has shown oil when bailed. This test had plug drilled at 2497 feet with total depth of 2500 feet in the Midway chalk. The oil was of heavy gravity, about the same quality as that found in Gulf Refining Company's Rainey A-1, Section 13-5-1e, which tested 13.2 gravity, and that found in Love Petroleum Company's Maley 1, Section 15-5-1e, Hinds County. In fact several tests in the Jackson field have shown traces of oil at the contact of the Midway black shale and the Midway chalk. The oil from the Gammill-Hartfield 1 was warm and steamed on the pit.

The Gammill-Hartfield 1 topped Midway shale at 2410 feet and the chalk at 2496 feet. The well when first tested at 2497 feet showed nothing, but upon being deepened showed the oil. Arrangements were being made late last week to set liner. There is some discussion of a report that black shale was cored after the chalk was encountered. Seven-inch OD casing was set at 2476 feet.

Pirtle and Flint, during the week ending January 10, completed Negro Fair Association 1, NW SE Section 28-6-1e, a northwest edge well in Hinds County, as a 10,000,000 cubic foot gasser with a trace of salt water at total depth of 2507 feet, elevation being 307 feet. Midway shale was 2420 feet and Midway chalk was topped at 2498 feet. Six-inch casing was set at 2379 feet and 4½-inch casing was set at top of the chalk.

On Saturday, January 10, Pearl River Oil & Gas Company was drilling in Pate 3, SE SW Section 12-5-1e, Rankin County, in the southeast part of the field, 6⅝-inch casing having been set at 2371 feet, Midway shale having been topped at 2385 feet. Elevation is 269.5 feet.

Atkisson and associates have succeeded in killing the gas in Wiggins 1, NW NE Section 33-6-1e, which threatened to crater after being completed making from 6,000,000 to 15,000,000 cubic feet of gas. The gas was coming out between

the six-inch casing and the surface pipe. A string of 4½-inch casing will be run inside the six-inch.

Love Petroleum Company's Maley 1, SE NW Section 15-5-1e, Hinds County, which for several weeks has been making about 50 to 75 barrels of heavy oil of about 13 gravity, several hundred barrels of salt water, and about 3,000,000 cubic feet of gas daily, was killed January 9 by the Halliburton Oil Well Cementing Company, using 150 sacks of "mud-weight." This well has several barrels of heavy oil in pits. This well topped Midway shale at 2387 feet, topped chalk at 2437 feet and has elevation of 257.3 feet; 6⅝-inch casing was cemented at 2487 feet.

Amory Petroleum Corporation, using 10 quarts of gelatin, "shot" Carter 3, SE SE Section 7-13s-19w, Monroe County, Amory district, Northeast Mississippi, and increased the gas yield to 201,000 cubic feet daily. Previously the well had gauged 182,000 cubic feet of gas daily with 380 pounds rock pressure.

Two Champagnolle Wells Show Production Increase

Shreveport.—Two recently completed wells in the Champagnolle (Rainbow City) field of Union County, Arkansas, one making heavy oil and one making light oil during the week ending January 10 showed a substantial increase in their flow and caused a gain of 1040 barrels in the daily average for that district, which rose to 4750 barrels. The two wells are Ohio Oil Company's Crain 9, NE SW Section 1-7-14, and Pumphrey 4, NE NW Section 12-17-14. The former is now making over 1000 barrels of oil daily and the latter 1250 barrels daily.

In northwest Arkansas Red Bank Oil Company has deepened Hamm 1, Section 33-10-26w, Franklin County, to total depth of 3793 feet and completed the well which gauged 8,500,000 cubic feet of dry gas with 875 pounds rock pressure. Originally the well was completed at 3750 feet gauging 6,500,000 cubic feet of gas.

During the last week Arkansas-Louisiana Pipe Line Company's Jno. Jansen 1, NE NE Section 35-8-24, a wildcat in Logan County, was abandoned as dry in sandy shale at 2400 feet; 13 3/8 inch casing was set at 343 feet.

A wildcat will be drilled in Grant County, Arkansas, by Spann and McClung who have made location for Sarah Page 1, SW NW Section 3-3-12. Wilson and Chapman have rig up for Hadley 1, NE SW Section 3-18-13, Union County, Urbana district.

With 300 feet of fluid in the hole Wesson and Bonner are waiting for a power hook-up to pump Wesson 1, SW NW Section 22-15-19, a wildcat in Ouachita County, Arkansas, at total depth of 2151 feet.

Panola County Test Near Completion in Trinity

Shreveport.—Another test of the upper Trinity formation in the Bethany gas field of Panola County, East Texas, where there are now three gas wells producing in the 4500-4600-foot level, will be made within the next few days, Texas-Louisiana Production Company having cemented 6⅝-inch casing at 4575 feet during the week ending January 10. With 13 operations under way in Panola County, including rigs up, four are designed for Trinity zone tests.

A new location has been made for a wildcat test in Marion County, Texas, the new location being Rondeau and Hindman's McGaughery 1, W. J. Wills Survey, four miles from Ore City, Texas. In the same county Trammell and associates in Hussey 1, Charles Lockhart Survey, have a fishing job, having pulled drill stem in two, leaving 10 joints with collar and bit at bottom of the hole, which is 1878 feet, corrected measurement.

Utility Men Oppose Capper Bill to Regulate Gas Lines

St. Louis.—Representatives of public utility regulating commissions of 12 states met at the Hotel Statler, this city, January 10, to consider the proposed Capper gas control bill, and expressed considerable doubt as to the desirability of federal control over the interstate operations of natural gas pipe lines. On a test vote, the group went on record as opposed to the Capper bill, recently introduced in the United States senate by Senator Capper of Kansas, which would create a federal commission to regulate the natural gas pipe line business.

Later the group voted to appoint a committee of five to study the matter and prepare a substitute for the Capper bill.

The meeting was called by the Public Service Commission of Kansas and Commissioner Clinton H. Montgomery of that body was elected chairman. John H. Porter, a member of the Missouri Public Service Commission, acted as secretary.

Montgomery told of the rapid increase in the transmission of natural gas through interstate pipe lines which has given rise to many regulatory problems. One of these interstate pipe lines, that of the Mississippi River Fuel Corporation, brings natural gas to St. Louis from Louisiana, but at present is sold only to industries.

Commissioner Charles D. Shukers of Kansas explained why the Kansas commission is asking for some form of federal regulation. He said the Doherty companies, operating over a large section of that state, have maintained a city gate rate of 40 cents a 1000 cubic feet for gas and that the state commission has been unable to exercise any control, the federal courts having held that wholesale delivery of gas by pipe line from one state to a separate distributing company in another state is an interstate transaction and beyond the power of the states to regulate.

A similar situation exists in Missouri, Chairman Stahl said, where a Doherty pipe line company successfully has maintained the 40-cent gate rate to the local distributing company, owned by the same interest, contrary to orders of the state commission.

State commissions were represented as follows:

Missouri—Chairman Stahl, Commissioner Porter and D. D. McDonald, general counsel.

Kansas—Chairman Jesse H. Grecleaf, Commissioners Montgomery, Shukers and Robert Foulston, and C. W. Steiger and Earl H. Hatcher, attorneys.

Minnesota—Chairman Jacobson, Commissioner C. J. Laurisch, D. F. Jurgenson, chief engineer, and J. O. Johnson, chief investigator.

Louisiana—Chairman Williams; Michigan, Commissioner Robert H. Dunn; Tennessee, Malcolm R. Williams, chief engineer; Indiana, Commissioner C. F. McIntosh; Oklahoma, Paul A. Walker, special counsel and commissioner-elect; Georgia, E. M. Price, rate expert; Maryland, Chairman Harold E. West; Iowa, Commissioners Webster and B. M. Richardson.

North Dakota—Chairman Ben C. Larkin.

Los Angeles.—A 200-mile, 30-inch gas line, to be the largest of its kind ever constructed, will be laid between Kettleman Hills and Los Angeles basin cities by Southern California Gas Company and Southern California Edison Company. The cost of the line will exceed $9,000,000 and will double the capacity between the San Joaquin valley and Los Angeles basin districts. The huge gas waste at Kettleman Hills has attracted the additional investment, although ultimately a systematic method of wholesale distribution probably will be worked out and sales will be completed on the same basis as in other settled fields.

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
KERN FRONT—		
Chanslor-Chanfield Midway Oil Co., 37, 23-28-27	250	2225
LONG BEACH—		
M. & A. Oil Co., Painted Hills 2	1200	5660
MIDWAY—		
Chanslor-Canfield Midway Oil Co., 88	400	2865
PLAYA DEL REY—		
Beverly Hills Pet. Corp., 3	400	4255
International Pet. Co., 3	350	4555
The Ohio Oil Co., Gun Club 4	2600	5515
Union Oil Co., Townsite 3	1100	5855
Rich Pet. Co., 1	600	4565

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BUTLER COUNTY—		
Condon & Cadman, Price 1, ne nw se 8-29-6e	*	2901
MARION COUNTY—		
Stearns & Streeter, McNichol 2, ne c 15-17-4e	100	2339
McPHERSON COUNTY—		
Rush-Graham Bros. & Shell, Robinson 1, (owd) c se sw 10-19-2w	¶12	2920
MORRIS COUNTY—		
Snyder et al, Carpenter 4, c nw ne 27-17-7e	¶¼	600
3, c sw se 27-17-7e	¶¼	600
2, c nw se 27-17-7e	¶½	600
1, sw c ne 27-17-7e	¶½	600
MORTON COUNTY—		
Texas Interstate Pipe Line Co., Phillips 1, c se 16-35-39w	¶10½	2670
STEVENS COUNTY—		
Pioneer Pet. Co., & Rosenthal, Eby 1, c ne 16-35-38w	¶3	2610

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
Anderson, Eaves 7, sw ne sw 24-1s-3w	600	2327
GRADY COUNTY—		
Nat.'l Gas Prod. Corp., Jolly 1, nw c 36-4n-8w	¶19	1928
HUGHES COUNTY—		
Erwin et al, Jones 1, se c ne 30-5n-10e	*	4776
LATIMER COUNTY—		
Midwestern O&G, Navarro 1, c nw se 12-6-21e	*	2075
LINCOLN COUNTY—		
Meade Bros., Meadville 3, c sw sw 25-17-3e	¶6½	3975
McINTOSH COUNTY—		
Brown & Brown, Estos 1, se c ne nw nw 35-11-15e	*	1146
MUSKOGEE COUNTY—		
J. E. McQuown, Smith 1a, ne c sw nw nw 6-14-19e	*	550
Rose et al, Howard 3, (owd) ne c 30-15-16	*	1900
Moore & Crow, Hood 1, (owd) c se sw 31-12-19e	¶½	740
OKFUSKEE COUNTY—		
Kingwood Oil Co., Jacobs 1, se ne ne 21-12-11e	*	3540
OKLAHOMA COUNTY—		
Long & Warr, Castle 1, sw c nw 20-11-3w	*	7450
I. T. I. O., et al, Banta 2, nw sw se 18-11-2w	*	4440
Theimer 4, sw nw se 1-11-3w	100	6338
Capitol Producing & Refg., Campbell 1, sw c nw sw nw 2-11-3w	11805	6280
Plains Pet. Co., Saddler 1, nw c sw sw 2-11-3w	8700	6180
Slick Estate & Atkinson, Clegg 2, ne c nw sw 2-11-3w	8700	6180
Blackwell O&G & Jones, Community 1, se c nw ne 10-11-3w	7975	6380
I. T. I. O. et al, Banta 1, sw c se 18-11-2w	200	6620
OKMULGEE COUNTY—		
C. Ramstead, Hoffman 1, ne c 29-12-14e	¶½	754
A. McInturf, Hawkins 1, cel se nw 20-12-14e	*	2286

For Tabulation and Comparison See Market Section

Company, Well and Location	Initial Production Bbls.	Depth
POTTAWATOMIE COUNTY—		
Robinson & Hicks et al, Crouch 1, nw c sw 5-6-5e	*	4404
SEMINOLE COUNTY—		
Mid-Kansas & Ramsey Pet., Davis 2, ne se nw 30-8-8e	16405	3970
WAGONER COUNTY—		
R. L. North, Roberts 1, ne c nw ne 6-17-17e	¶½	980

NORTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
Fraser & King, King 1	*	1825
H. P. Key et al, Andrews 1	*	925
Frank Hutchison et al, Hildebrand 1	30	1164
Marr et al, Andrews 1	*	1160
A. P. Nicholson et al, Speer 1	*	760
Shappell Oil Co., Wallace 4-E	*	1842
Wheeler & Brashear, Benson 1	*	932
THROCKMORTON COUNTY—		
Harris et al, Keeter 1	*	1307
Woodley Pet. Co., Moore 2	¶½	690
WICHITA COUNTY—		
Mogren & Anderson, Goetz 20	*	500
Rhoden & Bilile, Meyers 1	*	2200
WILBARGER COUNTY—		
L. G. Bradstreet Co., Waggoner 6-C	25	2534
Hoover Scientific Dev. Co., Waggoner 1-C	*	1812
NORTH YOUNG COUNTY—		
Alexander et al, Jeffrey 1-B	*	950
Arp & McClanahan, Mansye-Barrett 1	*	650
Atlantic Oil Prod. Co., Jeffrey 1	*	852
Beavers et al, Newman 1	10	561
Belknap Coal Co., Fee 5	50	665
Frank E. Boardman et al, Belknap 1	*	738
Deep Oil Dev. Co., Mrs. Logan 1	*	801
F-H-E Oil Co., Finch 1-C	280	659
Riggs & Mollenkamp, Ward 1	*	805
T. B. Slick-Pitzer & West, Williamson 1	40	3879
Staley et al, Meaders 1	*	832
The Texas Co., Finch 3-B	220	675
E. D. Willis et al, Perkins 4	*	700
Young Bros. & Terrell, Larimore 4	*	700
SOUTH YOUNG COUNTY—		
Conner-Cloughly et al, Ford 4	*	1900
Seaboard O&G Co., Graham 2	*	2990
E. C. Stovall et al, Fee 13	*	3963

CENTRAL WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BROWN COUNTY—		
Paramount Oil & Roy. Corp. et al, McDonald 1	¶1	1180
Roberts et al, Whitehead 1	*	1730
CALLAHAN COUNTY—		
Beddingfield et al, Henderson 1	*	470
COLEMAN COUNTY—		
Gant et al, Lowe 1	*	1955
Guffey Bros. et al, Peggie 2	*	733
McCamey et al, McClure 1	*	1600
PALO PINTO COUNTY—		
Christie Bros. et al, Allen-Richie 1	*	4575
L. Peters et al, Riebe 1	*	4010
SHACKELFORD COUNTY—		
Hays et al, Clausell 1	*	843
Lynch et al, Lynch 1	*	603

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
RUSK COUNTY—		
Anderson-Williamson County Properties, Bradford (4-ac) 1	100	3592
H. L. Hunt et al, Bradford (17-ac) 1	100	3650
VAN ZANDT COUNTY—		
Humble O&R Co., R. S. Blake 6	10,000	2935
R. S. Blake 7	7,500	2931
Pure Oil Co., R. C. Crim (30-ac) 2	75	2954
J. M. Martin (134½-ac) 1	1,000	2968

TEXAS PANHANDLE

Company, Well and Location	Initial Production Bbls.	Depth
GRAY COUNTY—		
Gulf Prod. Co., Faulkner 3-A	160	2884
Stanolind O&G Co. (was Midwest), Taylor 1-B	*	3420
HUTCHINSON COUNTY—		
Combination O&G Co., Johnson-Wheatley 1	¶50	2603
Huber Pet. Co., R. F. Cheatham 1	¶3-5	3115
MOORE COUNTY—		
Sunray Oil Co., C. R. Jones 1	¶20-2500	3371
POTTER COUNTY—		
Texas Interstate P. L. Co., M. G. Rockwall (Sec. 102) 1	¶6	2408
WHEELER COUNTY—		
Wischkamper et al, Kiser 1	¶5	2640

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
CRANE COUNTY—		
Gulf Prod. Co., J. T. McElroy 86	150	2980
JONES COUNTY—		
Union Oil Co. (Nevada), Hedrick 1	90	1971

NEW MEXICO

Company, Well and Location	Initial Production Bbls.	Depth
EDDY COUNTY—		
Geo. F. Getty Oil Co., Cook-Ironsides 1	*	390
LEA COUNTY—		
Galt-Brown Co., State 1	*	5127

SOUTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ZAPATA COUNTY (Muckelroy pool)—		
Nordan & Morris Pedro de los Santos 1	¶30	1373
CUELLAR POOL—		
O. W. Killam Cuellar 36-B	75	1595
C. Cuellar 37	75	1596

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
CADDO PARISH (Pine Island)—		
Texas Co., Caddo Levee Board 75, 33-21-16	35	1835
LA SALLE PARISH (Urania)—		
Montague Oil Co., Zenoria Lbr. Co. 11, 10-9-1e	15	1513
RICHLAND PARISH—		
Hope Prod. Co., Thomason 2, 11-16-6e	¶23¼	2406
Southern Carbon Co., Hale B-1, 15-16-6e	¶40¾	2440
J. H. Hamler B-2, 14-16-6e	¶44½	2441
State Line O&G Co., Hewitt 1, 32-16-6e	¶14½	2450

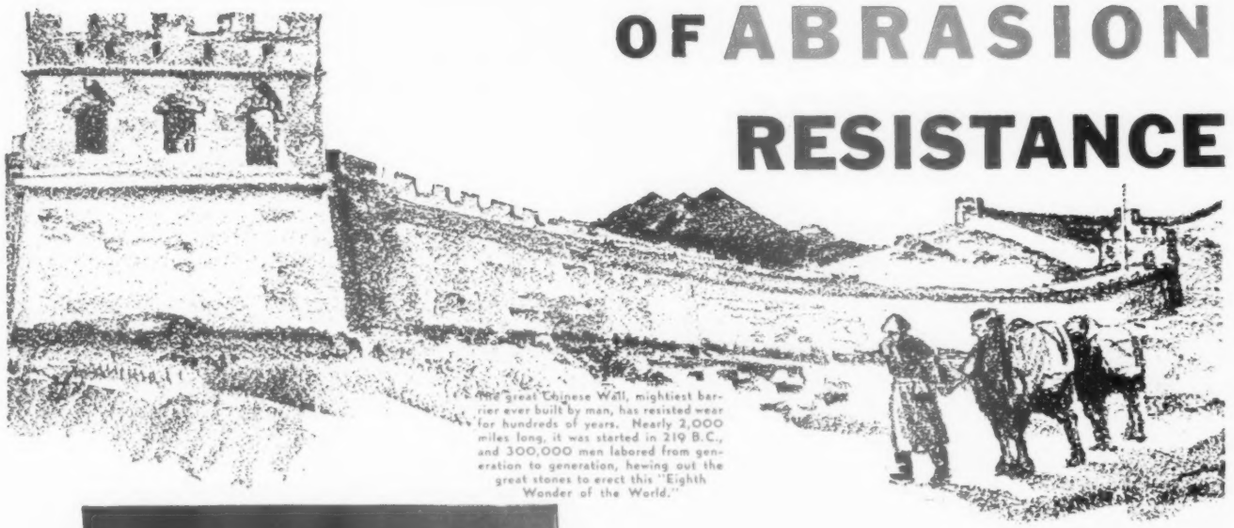
ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
UNION COUNTY (Smackover)—		
Root Ref. Co., Wilson 9, 6-16-15	5	2558

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BARBERS HILL—		
McAlbert Oil Co., Anne Higgins 2	1200	5115
CLAY CREEK—		
Sun Oil Co., Grimm 1	480	1260
ESPERSON—		
Cranfill-Reynolds Co., Esperson 9	*	4971
Esperson 16	350	3325
HIGH ISLAND—		
McLean Oil Co., Cade 19	520	4005
HULL—		
Empire G & F Co., Barngrover 22	150	4000
MOORES FIELD—		
Gulf Prod. Co., Moore 27	650	3540
NORTH DAYTON—		
Harrison & Abercrombie, Jones 1	*	4313
PIERCE JUNCTION—		
Rio Bravo Oil Co., Settegast 14-A	480	5080
SPINDLE TOP—		
Yount-Lee Oil Co., McFadden 68	110	4125
STRATTON RIDGE—		
Freeport Sulphur Co., Seaburn 4	*	900
Seaburn 5	*	930

A SOLID WALL OF ABRASION RESISTANCE



The great Chinese Wall, mightiest barrier ever built by man, has resisted wear for hundreds of years. Nearly 2,000 miles long, it was started in 219 B.C., and 300,000 men labored from generation to generation, hewing out the great stones to erect this "Eighth Wonder of the World."

BLACKOR STEEL

BLACKOR protects the entire cutting surface of your bit from rapid abrasion ...not just spots here and there. It provides a solid wall of abrasion resistance that keeps your bit in the hole, longer, digging away. This solid cutting face can be of any desired shape or hardness and outwears ordinary hard-facings and inserts from 3 to 5 times. BLACKOR doesn't chip off, either!

Besides helping your bit to dig more hole, faster, BLACKOR produces great economies in application. So hard that it requires the carbon electric arc, BLACKOR can be applied 10 times cheaper than with acetylene...and this saving is multiplied in isolated fields. Economical to use, too, because one ounce will cover approximately 4 square inches.

Ask for latest Catalog.

BLACKOR COMPANY

Head Office: 13007 South Main St., Los Angeles, Calif.
New York Export Office: 39 Cortlandt Street
Tulsa, Oklahoma Office: 219 South Jamestown Avenue
Houston, Texas Office: 1506 La Mar Street

BLACKOR

The Super Abrasion-Resistant Facing

LOUISIANA GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
EAST HACKBERRY—		
Calcasieu Oil Co., Watkins 23	1270	2844
Watkins 21, w.o.	350	4095
LOCKPORT—		
Union Sulphur Co., Martha Moss 1	*	6622
Vacuum-Gulf, Miller 30	830	4370
VINTON—		
Gulf Refg. Co., Gardiner Est. 4	100	3600

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD FIELD—		
South Penn Oil Co., Farm 4053 tr 12	2	....
Farm 4053 tr 13	2	....
Farm 4053 tr 14	2	....
Farm 4053 tr 15	2	....
Farm 4053 tr 16	2	....
Farm 4053 tr 17	2	....
Farm 4117 tr 2	2	....
Hawkins Oil Corp., Hawkins 40	2	....
Hawkins 41	2	....
Hawkins 42	2	....
Hawkins 43	2	....
Scraxton & Son, South Penn 1	2	....
Wal Oil & Gas Co. Finley 1	2	....
CLARION-VENANGO—		
Corbett & White, Fee 15	2	....
Swartzfager & Co., Goughler 1	¶¼	....
Fryburg Moter Co., Kapp 1	¶½	....
Kaspy Oil Co., Lands, 1, 2, 3, and 4, Lands (4 wells)	*	....
BUTLER COUNTY—		
M. B. Finnessey, Shanor 2	2	....
T. W. Phillips Oil & Gas Co., Varoff 1	¶¼	1800
E. C. Dunlap, McIntosh 2	4	....
CENTER-MIDDLE FIELD—		
Buck & Drake, Duke 1	3	....
J. B. Randall, Middaugh 1	2	....
WASHINGTON COUNTY—		
Hopewell Oil & Gas Co., Caldwell 1	*	875
Manufacturers Light & Heat Co., Ames, 3436		3165
GREENE COUNTY—		
Union Gasoline & Oil Cor. Garlon 1	¶2	2918
Equitable Gas Co., Rumble 1	¶2	2405
ALLEGHENY COUNTY—		
D. K. & M. C. Rodgers, Seibert 1	*	2075

NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
ALLEGANY COUNTY—		
Burt Oil Corp. Burr 1	2	....
J. H. Brahney & Co., Van Campen 1	2	....
Mary Lippert, Lippert 27	4	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
RITCHIE COUNTY—		
West Virginia Utilities Co., McNeil 2	*	1980
Warrior Oil Co., Warden & Co. 2	*	....
F. A. Deem & Co., Haught 1	4	....
R. B. Roberts, Perrine 2	5	....
WETZEL COUNTY—		
Hamilton & McNeely, Hunt 1	¶1	3426
Pittsburg & West Virginia Gas Co., Furbee 5400	¶1	3353
Midland Oil & Gas Co., M. Baxter 1	¶1½	2372
Earl Hammon & Co., L. Baxter 2	¶½	....
MINGO COUNTY—		
Red Jacket Oil & Gas Co., Red Jacket Coal Co., 15	¶1½	1323
MARSHALL COUNTY—		
Manufacturers Light & Heat Co., Rine & Co., 3457	¶1½	2060
TYLER COUNTY—		
Union Gasoline & Oil Corp., Soles 1	8	....
GILMER COUNTY—		
Middleton Natural Gas Co., Woofter 2	*	2208
MARION COUNTY—		
S. H. Elliott, Hibbs 4	10	3295
ROANE COUNTY—		
Federal Oil & Gas Co., Pell-Newman 50	5	....
HARRISON COUNTY—		
Reserve Gas Co., Hilkey 1	¶1	3000
CABELL COUNTY—		
Hamilton Gas Co., Hassir F-16	¶1	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
MORGAN COUNTY—		
Pierce & Co., Allard 3	¶¼	440
Whitmer & Co., Starrette 5	2	203
NOBLE COUNTY—		
Cole Ridge Oil & Gas Co., Bechler 6	1	1296
WASHINGTON COUNTY—		
Turney & Co., Leasure 27	2	513
Warden & Fulmer, Watson 1	¶¼	1824
Bowie & Co., Robinson 11	*	1350
Warden, Cleary, Laughlin 5	*	1312

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
MUSKINGUM COUNTY—		
The Pure Oil Co., Frank McKee 2	172	3021
Ohio Fuel Gas Co., Miller 1	¶¼	3978
The Atha Co., Dietenbach 1	¶¼	4042
MEDINA COUNTY—		
Oko Oil & Gas Co., Essig 46	60	379
Edson & Co., Ripley 37	1	470
G. W. Packard 11	*	500
HOLMES COUNTY—		
East Ohio Gas Co., Pyers 4	40	3508
Lyric Oil & Gas Co., Shank 6	*	861
ASHLAND COUNTY—		
Robinson & Co., Young 6	¶¼	16	647
Sellers 7	*	673
STARK COUNTY—		
East Ohio Gas Co., Blake 1	¶¼	4372
Kime & Co., Firestone 1	¶1½	4462
LICKING COUNTY—		
Everette Gas Co., Claypool 4	135	2847
KNOX COUNTY—		
The Preston Oil Co., Beatty 2	¶¼	7	3103
PERRY COUNTY—		
Berlin & Co., Emmert 2	¶¼	920
ATHENS COUNTY—		
Nuzum & Co., Halbert 2	*	1418
WAYNE COUNTY—		
Hulse & Kunditz, Landis 2	*	3219
HOCKING COUNTY—		
The Preston Oil Co., Sunday Creek Coal 97	*	3457

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
SENECA COUNTY—		
Honey Creek Oil & Gas Co., Burton 1	¶¼	2375
Arthur Geiger, Swartz 1	*	1737
HARDIN COUNTY—		
Wiser Oil Co., Jones 1	¶¼	....
Barnaby & Co., Kurt 6	¶¼	1360
Kurt 7	¶¼	1354
Ohio Oil & Gas Co., Curtis 1	¶¼	1395

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
CRAWFORD COUNTY—		
W. C. McBride, Inc., Magill 2	12	982
MADISON COUNTY—		
Painter, Goethe & Co., Cully 1 & 2	*	....
WABASH COUNTY—		
Highland Oil Co., Loeffler 2	*	1572
ST. CLAIR COUNTY—		
Riehl & Co., Karr 1	*	....

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
ISABELLA COUNTY—		
Wittmer Prop. Trus. McArthur 1	¶1	1376
CLARE COUNTY—		
McKay & Co., Brown 1	*	....
MUSKEGON COUNTY—		
Muskegon Deep Well Co., Heinz 1	*	....

First Government Gas Field For Unit Operation Approved

Thermopolis, Wyo.—The first oil or gas field on government land to be approved for unit operation by the Department of the Interior is the Buffalo Basin field northwest of here, in Hot Springs County. Secretary Wilbur approved an agreement proposed by operators in the district last week.

The field covers approximately 4800 acres and has an estimated gas reserve of 100,000,000,000 cubic feet. The new agreement provides that the government, which owns about 80 per cent of the field, shall receive royalties of 12½ to 16 2/3 per cent and that any leases issued will be subject to government agreement which is to be in effect for 20 years or until the field's development is completed. At present the production in the field is 5,000,000 feet which is marketed in the Big Horn Basin communities.

Expect Favorable Decision In Franchise Request

Cheyenne, Wyo.—Although there will be no definite decision for perhaps another 30 days, it is believed quite certain that the Wyoming state public service commission will grant a certificate of convenience and necessity to North Central Gas Company (New York Oil Company's interests) for a pipe line to be laid from the Muskrat gas field some 70 miles west of Casper to communities in Eastern Wyoming. The commission has given 20 days in which North Central Gas Company and those objecting—Montana Power Company and the Frank England interests—may file briefs, after which a decision will be rendered.

The proposed gas pipe line would serve the communities of Douglas, Glendo, Wheatland, Torrington, Lingle and Laramie.

Casper, Wyo.—Midwest Refining Company has announced that, effective January 1, it has taken over all operations of Midwest Exploration Company in Kansas. It had been previously announced that the company's properties and holdings in Texas and Oklahoma had been taken over by the new Stanolind Oil & Gas Company. Midwest Refining Company's Kansas properties and production were in the new central and western central part of the state.

Denver, Colo.—The Texas Production Company's recent completion in the Tow Creek field, in Colorado, was only one-quarter mile south of an igneous plug. Such a manifestation has always discouraged companies from drilling in their vicinity in the past, but the success of The Texas Production Company's attempt may provide a new geological angle. The well was Carsterphen-Irwin 4 on NW Section 5-6n-86w. Total depth was 3485 feet, and the well produced 100 barrels initial from the shale.

PERMITS GRANTED FOR NEW WELLS

For Tabulation and Comparison
See Market Section

ARKANSAS

GRANT COUNTY — Spann & McClung, Sarah Page 1, 600 ft w and 660 ft s ne cor nw¼, 3-3-12.

CALIFORNIA

BELRIDGE—Belridge Oil Co., Belridge 33-35, 35-27-20.

KETTLEMAN HILLS—Petroleum Securities Co., Burbank 1, 30-23-19.

LONG BEACH—Shell Oil Co., Stakemiller 9, 29-4-12.

LOS ANGELES COUNTY—The Texas Co., Repetto Hills 1, 4-2-12.

PLAYA DEL REY — Barnsdall Oil Co., Burks 11, 28-2-15.

KANSAS

ELLSWORTH COUNTY—Hershey et al's Schaltz 1, c ne, 9-14-8w.

GREENWOOD COUNTY—W. C. McBride, Inc.'s Good 1, c se sw 3-28-11e.

McPHERSON COUNTY — Lario O&G & Shell's Miller 4, nw c se 1-20-2w; Syndicate O&G & Shell's Becker 1, se c 36-19-2w.

RUSSELL COUNTY—Signal Oil Co.'s Rude 2, se ne sc 28-15-13w; Signal Oil Co. & Mid-Kansas O&G.'s Berry 2, sw nw sw 27-15-13w; Signal Oil Co. & Mid-Kansas O&G's Berry 1, nw sw sw 27-15-13w.

LOUISIANA

BOSSIER PARISH — United Prod. Corp., Shreveport, F. B. Treat el al 1, 14-17n-12w, 705 ft e and 600 ft s of nw cor, nw¼ of ne¼.

CADDO PARISH — Shreveport Oil Corp., Shreveport, Hicks 7, 32-21n-15w, apprx. 1100 ft n and 1200 ft w of se cor ne¼ of nw¼.

CALCASIEU PARISH—Gulf Refg. Co. of La., Houston, Gardiner-Noble Gray 70, 33-10s-12w, 400 ft e and 50 ft s of nw cor ne¼ of se¼. Gulf Refg. Co. of La., Houston, Lutcher & Moore 26, 19-10s-12w, 1085 ft n and 80 ft w of se cor of sw¼.

DE SOTO PARISH—J. M. Nabors, Mansfield, Earnest Nickleson 1, 32-13n-11w, 1200 ft n and 1800 ft w of se cor of sec.

JEFFERSON DAVIS PARISH — Vacuum Oil Co., Houston, Tietje 1, 14-9s-4w, 450 ft s and 750 ft w ne cor se¼.

SABINE PARISH—Lyons & Neely, Shreveport, Sabine Lbr. Co. 1, 1-7n-12w, 485 ft s and 660 ft w of ne cor of sec. John Woodley, Inc., Shreveport, Sabine Lbr. Co. 1, 12-8n-12w, 1764 ft n and 330 ft w of se cor of sec.

OKLAHOMA

ATOKA COUNTY—Edgerton et al's Rolland 1, c nw 9-1n-15e.

CARTER COUNTY—F. W. Merrick's McKee 1, se sw sw 20-4s-2w; Leonard Woodworth's Brady 1, nw sw sw 32-1s-2w.

COAL COUNTY—W. E. McGraw O&G's Stiring 1, ne c se 35-1n-8e.

CREEK COUNTY—F. R. Billingslea's Wayman 1a, ne c nw nw 22-15-8e; H. U. Bartlett's Whitehead 1, sw ne nw 20-18-9e.

OKLAHOMA COUNTY—Don Leon et al's Burt 1, sw c ne nw nw 10-11-3w; Argood et als 1, se c nw se se 15-11-3w.

OSAGE COUNTY—E. O. Platter, 6, ne c nw sw ne, 30-22-9e.

PITTSBURGH COUNTY — Choctaw Gas Co., 1, ne nw ne 16-7-18e.

PONTOTOC COUNTY—Clark & Cowden's Brown 2, se c ne 12-4n-7e; Empire Gas & Fuel Co.'s Williamson 1, sw c nw 7-4n-8e; Brydia Oil Co.'s Layne 1, se sw nw 30-5n-5e.

POTTAWATOMIE COUNTY — Twin State Oil Co.'s Archer 4, ne nw se 22-6-3e.

SEMINOLE COUNTY—Tillman et al's Mathis 1, nw c se nw se 29-6-6e; Magnolia Pet. Co., Reed 1 se nw nw 2-8-5e.

STEPHENS COUNTY—Smythe et al's House 2, nw c 29-2n-8w.

TULSA COUNTY—Bert Swift et al's Franklin 1, nw c sw sw 9-19-10e.

WAGONER COUNTY—R. L. North's Austin 2, se c sw se 31-18-17e.

TEXAS

ARCHER COUNTY—Fraser & King, Wichita Falls, W. King, 40, 1, Wm. Henry sur, 150 ft from s and w lines.

ANGELINA COUNTY—R. O. Moore, Lufkin, W. A. Abney, 23, 1, J. S. Quinalty sur, 150 ft from n and 300 ft from e line.

AUSTIN COUNTY—F. & M. Drilling Co., Houston, F. Dietrich, 40, 2, T. Bell sur, 150 ft from n and e lines.

BEXAR COUNTY—Eckert & Son, San Antonio, L. Brehm, 93, 1, 58, Burgnor sur, 550 ft from n and 160 ft from e line. Russell & Moore, San Antonio, O. A. Mills, 450, 3, A. Navarro sur, 97 ft w of No. 1. Gatlin Oil Co., San Antonio, I. A. Beck, 279, 1, Montez sur, 300 ft se of No. 3.

BROWN COUNTY — J. E. Ellis, Brownwood, B. S. Boysen, 40, 2A, S 604, P. Mangle sur, 150 ft from ne and 500 ft from se line. E. W. McCrary, Tulsa, J. I. Martin, 41, 11, Huling sur, 640 ft from n and 320 ft from w line; 12, 160 ft from w and 860 ft from n line.

CALDWELL COUNTY—L. H. Wentz, San Antonio, F. Holder, 100, 1, F. Berry sur, 150 ft from w and 150 ft from s line.

CALLAHAN COUNTY—Roy Guffey et al, Baird, E. L. Finley, 80, 1, S 75, Bayland Asy. sur, 450 ft e and 150 ft from s line nw½ ne¼.

COLEMAN COUNTY — Bartlett & Dozier, Santa Anna, M. M. Jennings, 100, 1, S 753, B 9, M. Martinez sur, 307 ft from n and w lines. Agnew & Sons et al, Coleman, S. E. Switzer, 115, 5, W. M. Farris sur, 360 ft se of No. 4. Guardian Oil Co. & Foster, Coleman, W. C. Sharp, 188, 2, B 91, B&S sur, 750 ft from n and 950 ft from w line. A. C. McGahhy et al, Coleman, M. Overall, 40, 1, S 9, B 1, GH&H sur, 330 ft from n and 200 ft from e line. P. H. Lavies Co., Coleman, M. T. Overall, 30, 2, S 71, GH&H sur, 330 ft from n and 1530 ft from e line. Anzac Oil Corp. et al, Coleman, H. J. Martin, 160, 1, S 496, WCSL sur, 450 ft from s and w lines of Blk. 8. Guffey Bros., Baird, Peggy, 2, S 275, B. Alderata sur, 300 ft from s and e lines of survey.

DELTA COUNTY — Everts Drilling Co., Wichita Falls, M. Sansing, 40, 1, J. B. Craig sur, 150 ft from s and e lines.

EASTLAND COUNTY—H. H. Diles, Eastland, M. Williams, 100, 1, W. Van Norman sur, 450 ft from n and e lines. E. J. Keough et al, Cisco, B. B. Owens, 160, 1, S 78, B 4, H&TC sur, 350 ft from n and e lines of nw¼. Wilkins & Edwards, Eastland, T. Harrell, 37, 1, S 6, B 6, E. T. Ry. sur, 400 ft from n and 450 ft from e line.

GUADALUPE COUNTY — Magnolia Pet. Co., Dallas, M. S. Klein, 100, 6, J. W. Robinson sur, 300 ft se of No. 3. A. Knodel, 131, 5, J. W. Robinson sur, 450 ft from ne and nw lines.

HASKELL COUNTY — Bridwell Oil Co., Wichita Falls, E. P. Bunkley, 160, 1, Wm. Dennis sur, 1520 ft from n and 2440 ft from e line survey.

HARRIS COUNTY—Smith & Hamill Drilling Co., Houston, Parsons, 1, 4, W. F. Jones sur, 25 ft from s and 524 ft from w line.

IRION COUNTY—Denney & Andrews, Dallas, F. Tankersley, 106, 1, S 723, H. J. Volker sur, 1000 ft from e and 160 ft from s line of survey.

JIM WELLS COUNTY — Blair & Son & Stewart, Laredo, M. Perez, 40, 1, S 9, Blk. 16, 150 ft from s and w lines.

LIBERTY COUNTY—Gulf Prod. Co., Houston, E. W. Boyt, 621, 11, A. Allen No. 22, H&TC sur, 500 ft e of No. 10. Humble Oil & Refg. Co., Houston, R. S. Sterling, 7, J. McFadden sur, 50 ft w of No. 6. Cranfill & Reynolds, Houston, Moores Bluff, 632, 8, M. Duncan sur, 400 ft w of No. 2. Esperson, 660, 18, C. W. Fisher sur, 400 ft s of No. 7.

LIVE OAK COUNTY—Houston Oil Co., Houston, Brown, 2444, 4, M. B. Kivlin sur, 200 ft from se and sw lines.

MEDINA COUNTY—J. M. Hickey et al, San Antonio, W. B. Odom, 320, 1, S 174, H. Castro sur, 1270 ft from e and 150 ft from s line.

MOORE COUNTY—Gulf Prod. Co., Houston, C. L. Kilgore, 160, 2, S 29, B. P. McEL&R sur, 1320 ft from s and e lines of sec.

PECOS COUNTY—Magnolia Pet. Co., Dallas, H. J. Eaton, 80, 1, S 35, B 3, H&TC sur, 330 ft from nw and ne lines. J. R. Belle et al, Fort Stockton, H. J. Eaton, 80, 1, 833, B 3, H&TC sur, 2310 ft from ne and 990 ft from se line sec.

POTTER COUNTY — Canadian River Gas Co., Crawford, B, 1, S 78, B 018, D&P sur, 1200 ft from n and 1174 ft from w line.

RUSK COUNTY—Babcock Bros. & Gordon, Denison, W. W. Camp, 4, 2, J. Ximinez sur, 360 ft e of center of w line; 1, 180 ft from s and 205 ft from e line. H. L. Hunt, Henderson, D. M. Bradford, 17, 2, J. Ximinez, Blk. 12, 165 ft from w and 225 ft from s line. C. Ashby, 114, 1, J. Ximinez sur, 700 ft from n and 165 ft from e line. Shaw Oil Co., Wichita Falls, Ashby, 2½, 1, J. Ximinez sur, 150 ft from nw and ne lines. Haynes Drilling Co., Inc., Shreveport, J. T. Brown, 40, 1, M. J. Pru sur, 150 ft from n and e lines. Akin & Rayzor, Wichita Falls, C. Ashby, 2½, 1, J. Ximinez sur, center. Lloyd Oil Corp., Fort Worth, Crystal Farms, 25, 1, T. O. Barr sur, 150 ft from w and 600 ft from s line Blk. 42.

REFUGIO COUNTY—Dash Prod. Co., San Antonio, Talman, 1, Blk 104, Refugio sur, center.

ROBERTSON COUNTY — W. M. Quick, Hearne, E. G. Marsh, 1, S 17m, H. Henry sur, 1500 ft from sw and 565 ft from se line. Griffith & Burnham, Fort Worth, W. Sackville, 1020, 1, J. M. Viesca sur, 150 ft from n and e lines. Wm. Sackville, 1092, 1, J. M. Viesca sur, sw corner.

ROCKWALL COUNTY — A. W. Walker, Dallas, M. S. Jones, 40, 1, M. Simmons sur, 1000 ft from e and 275 ft from s line.

SHACKLEFORD COUNTY—B. L. Russell, Baird, B. Brooks, 80, 1, S 91, Univ. Lands sur, 150 ft n of No. 1; 2, 150 ft n of No. 1.

STEPHENS COUNTY — J. Urban et al, Ranger, Riddle, 480, 6, S 25, B 6, T&P sur, 330 ft from s and e lines of sw¼.

TRAVIS COUNTY—Bohls & Wilson, Taylor, L. R. Norton, 350, 1, J. Cole sur, 900 ft from e and 1200 ft from s line.

UPTON COUNTY—Cosby Prod. & Royalty Co., Fort Worth, Sherk, 160, 1, S 15, B 3, MK&T sur, 328 ft from e and 468 ft from s line sw¼. Penn Oil Co., Dallas, J. M. Halamick, 640, 1, S 93, B D, CCSD&RGNG sur, center of se¼.

VAN ZANDT COUNTY — Pure Oil Co., Fort Worth, R. C. Crim, 30, 2, N. C. S. L. sur, 250 ft from s and e lines. A. D. Clark, 36, 6, J. Walling sur, 212 ft from n and 242 ft from e line; 7, 203 ft from n and 200 ft from w line. Pure Oil Co., Fort Worth, R. A. Howell, 22, 3, A. McPhail sur, 225 ft from s and w lines. L. V. Freeman, 31, 2, J. Walling sur, 250 ft from n and w lines.

WICHITA COUNTY—D. C. Thomas, Wichita Falls, W. Burnett, 80, 1, BS&F sur, 1050 ft from n and 1475 ft from e line.

WARD COUNTY—Shipley Oil Corp., Midland, Hayzlett, 160, 5, S 17, B 5, H&TC sur, 150 ft from nw and 660 ft from ne line.

WHARTON COUNTY—Rose Tex. Oil Co., Rosenberg, G. A. Harrison, 66, 1, S. F. Austin sur, 50 ft from sw and 500 ft from se line.

WILBARGER COUNTY—W. W. Bennett, Vernon, A. P. Hawley, 1, S 29, B 2, H&TC sur, 1690 ft from n and e lines. S. M. Farha Trust Co., Vernon, W. H. Johnson, 80, 1, S 11, B 10, H&TC sur, 500 ft from s and w lines. Texas Co., Wichita Falls, W. T. Waggoner, A, 391, S 5, B 13, H&TC sur, 660 ft n of No. 390; 390, 660 ft n of No. 386. Lowry Oil Corp., Wichita Falls, Harrold Pet. 14, S 25, B 13, H&TC sur, 400 ft from w and 450 ft from s line; 13, 150 ft from w and 200 ft from s line.

(Cotinued on page 89)

WILDCATS FROM ALL SECTIONS

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BOWIE COUNTY—		
Joe Burnham et al, G. W. Burnett 1	*	3150
CASS COUNTY—		
Phillips Pet. Co., J. R. Olds 1.....	*	4100
HENDERSON COUNTY—		
Texas-State Oil Co. et al, T. H. Skinner 1	*	4581

ANDERSON COUNTY — Frost Oil Co.'s Botting 1, A. B. Patton sur, elev 354 ft, Pecan chalk 2934-3158 ft, tested dry in sandy-shale 3460-70 ft. Humble O&R Co.'s J. W. McCaffrey 1, I&GN Ry. Sur A-418, elev 365 ft, Pecan chalk 2875-3163 ft, Austin chalk 4041-4382 ft, Woodbine sand 4562-4664 ft, dr sandy-shale 5360 ft.

BOWIE COUNTY—Lee Timberlake et al's Tidwell 2, L. M. Rice sur, elev 290 ft, top Nacatosh sand 710 ft, sd 720 ft. Joe Burnham et al's Burnett 1, dry and abn 3150 ft. Maud Redwater Oil Co.'s Merritt 1, Y. S. McKinney sur, sd 635 ft.

CASS COUNTY—Wesley Morse et al's Henderson 1, C. C. Bailey sur, dk. Phillips Pet. Co.'s Olds 1, dry and abn 4100 ft. Olds-Smith et al's Joe Athenay 1, J. C. Byers sur, sp and sd. John C. Rogers et al's W. Q. Henderson 1, Wm. Davis sur, dr 255 ft; Lanier 1, K. A. Welborn sur, elev 366 ft, top Annona chalk 2144 ft, sd 2275 ft.

CHEROKEE COUNTY—Arcadia Ref. Co. et al's Jones Gin lot 1, Edson Gee sur, elev 481 ft, top Pecan chalk 2978 ft, dr chalk 3139 ft. D. Harold Byrd et al's Farriss 2, cem sur cas. Lloyd Oil Corp. & Garland Moore's G. A. Tomme (49-ac) 1, Wm. George sur, lcn.

DELTA COUNTY—Delta Dev. Co.'s Hays et al 2, rig. D. S. Hoad et al's J. J. Baker 1, T. P. Eddin sur, sd with trace oil and gas 1550 ft. Worthington & Stedham's W. H. Dejernett 1, E. Chick sur, dr 1325 ft.

ELLIS COUNTY — Foster & Richardson's Moise-Cerf 1, sd 2187 ft. E. M. Rogers et al's J. L. Winn 1, O. Wheeler sur, sd 1360 ft.

FANNIN COUNTY—Ed. V. Parsons et al's Morgan 1, J. E. English sur, elev 668 ft, sd 3501 ft.

FRANKLIN COUNTY—Harper-Byers Oil Co.'s A. J. Laws 1, D. G. Rogers sur, sd 1735 ft.

GREGG COUNTY—W. T. Daniel and Mrs. Mamie Hammonds' Hamby 1, John Lout sur, elev 376 ft, top Saratoga chalk 2361 ft, sd 2590 ft. W. A. Moncrief-J. E. Farrell & Arkansas Fuel Oil Co.'s F. K. Lathrop 1, Wm. Robinson sur, elev 401 ft, Pecan chalk 2458 to 2889 ft, coring 3562 ft. W. L. Brandon et al's J. F. Richards 1, Mary Van Winkle sur, lcn.

HENDERSON COUNTY—H. B. Ashburn et al's T. E. Terry 1, Arron York sur, elev 397 ft, Pecan chalk 2810-3015 ft, sd at top Austin chalk 3993 ft. E. L. Chapman et al's Cade Bros. 3, J. B. Dorsey sur, top Pecan chalk 3116 ft, dr 3295 ft. Texas-State Oil Co. et al's Skinner 1, dry and abn 4581 ft.

LAMAR COUNTY—K. O. Bundy-Everett & Allen's G. S. Legate 1, J. V. Cheney sur, dk.

LEON COUNTY—Sun Oil Co.'s Mrs. Ella Grayson 1, Sec. 36, Conception sur, materials.

LIMESTONE COUNTY — Emperator Oil Corp. et al's B. B. Barron 1, E. Mabry sur, co 1274 ft. Geo. B. McCamey et al's Kosse Townsite 1-A, sd 1515 ft. E. E. O'Bryne & E. L. Chapman's S. W. Hancock 1, H. York sur, sd 1165 ft. Ben Segal & Earnest Hundahl's A. E. Smith 1, M. N. Miller sur, top Pecan chalk 1579 ft, dr 2270 ft. A. M. Yost-Scheubert & Bill Reiter's S. J. Fenner 1, H. C. Hoskins sur, dr 2505 ft.

NAVARRO COUNTY—L. G. Priest et al's H. Albritton 1, Bazette area, top Austin chalk 2276 ft, dr 2638 ft.

RED RIVER COUNTY—D. M. Buffington et al's L. H. Moore 1, D. Cornelius sur, Annona chalk 3 to 241 ft, dr 1310 ft. E. L. Chapman et al's Morris-Guest 1, S. Larkin sur, sd 1505 ft. Droppleman & Bundy's J. W. Cunningham 1, S. V. Chi sur, sd 1625 ft. Johnson Pet. Co.'s Style 1, Dean sur, sd 2215 ft. Echols & Peters' E. Howison 1, W. Humphries sur, lcn.

RUSK COUNTY—J. W. Akin-J. P. Rayzoe & R. H. Dearing's C. D. Ashby (2½-ac) 1, materials. J. Alford et al's Wallace-Thrash 1, R. H. Pinney sur, dk. J. S. Anderson et al's E. B. Alford (20-ac) 1, materials. W. D. Anderson-Williamson County Properties' Thrash (17½-ac) 1, M. J. Prue sur, materials. Ed. W. Bateman et al's L. D. Crim 1, E. Sevier sur, elev 403 ft, Pecan chalk 2608-3014 ft, Austin chalk 3480-3552 ft, flowed rate 900 bbls 38 gravity oil per hr and shut in 3630-42 ft. Nick Barbare et al's J. T. Brown (36-ac) 1, M. J. Prue sur, rig. Harry W. Bleam et al's Jernigan (17-ac) 1, John C. Snow sur, lcn. Burton Drlg. Co.'s E. P. S. Florey 1, Peter Holmes sur, lcn. Burgoyne Bros. et al's J. A. Alexander (93-ac) 1, T. Jones sur, sd 2250 ft. Joe Burnham & Lloyd Oil Corp.'s Nicely 1, Thomas Obar sur, sp and sd. Capps & Smith's J. L. Cochran 1, J. Roth sur, lcn. E. L. Chapman et al's A. P. Finney (20-ac) 1, dk. J. F. Crabtree-Bill Rowe & Cade Johnson's C. D. Ashby (2½-ac) 1, materials. Deep Rock Oil Co.'s Mayfield Alford (30.2-ac) 1, dr 2730 ft. Dan Dillon et al's Frederick (19½-ac) 1, dk. Geo. Fagg et al's Camp (5-ac) 1, rig. Frank Files (Meredith & O'Mara's) Robertson (14-ac) 1, dr 410 ft. Frank Foster-Jeffries et al's Mayfield Alford (9-ac) 1, dr 2550 ft. Frank Foster-Deep Rock Oil Co. & Wainwright-West Oils, Ltd.'s, Camp (7½-ac) 1, dr 1840 ft. Haynes Drlg. Co.'s J. T. Brown (40-ac) 1, M. J. Prue sur, elev 486 ft, dr 2750 ft. H. L. Hunt et al's C. D. Ashby 1, elev 391 ft, top Pecan chalk 2545 ft, dr 2910 ft. E. M. Jones et al's W. R. Crim (10-ac) 1, Robt. E. Winn sur, rig. Knox et al's Melton 1, dk. Laster Oil Co.'s D. Bradford 1, Lot No. 14, rig. Lide-Taylor Oil Co., Inc.'s., Calvin Young (40-ac) 1, M. J. Prue sur, elev 475 ft, top hard Pecan 2714 and hard Pecan chalk 2755 ft, dr 2940 ft. Tex Lloyd Oil Co.'s Camp (5-ac) 1, elev 408 ft, swab and flowing at 3541-67 ft. J. K. Lewis & Goodman's O. C. Jones (15-ac) 1, elev 507 ft, Pecan chalk 2420-2950 ft, dr 3140 ft. Patton & Harrell's Frederick 1, lcn. Robert Oil Corp. & G. H. Chizum's Ashby (2½-ac) 1, dr 1315 ft. Rusco Oil Co.'s D. Bradford 1, Lot No. 13, dr 1500 ft; Robertson 1, dr 450 ft. Bert J. Shaw & C. Andrade's Ashby (2½-ac) 1, dr 200 ft. Tidal Oil Co. & Wm. Johnston's C. E. Holland (15-ac) 1, lcn. United Producers Co. et al's Mayfield Alford 1, dk. Wainwright-West Oils, Ltd.'s, Moore 1, materials. Nat Sadler et al's W. C. McElroy (45-ac) 1, Abner Nail sur, lcn. Jack Younger & Hill's D. Bradford (5-ac) 1, dk. J. W. Olvey et al's W. R. Crim (20-ac) 1, Robt. E. Winn sur, dk.

SMITH COUNTY—Owens-Sloan Oil Co. & R. H. Davis' J. H. Starnes 1, J. W. Allen sur, elev 417 ft, Pecan chalk 2738-3052 ft, top Austin chalk 3771 ft, testing sand 4235 ft. T. B. Slick & J. G. Kugle, Jr. et al's M. Freeman 1, A. J. Lagrone sur, elev 498 ft, Pecan chalk 2980-3275 ft, sd in Austin chalk 3623 ft.

UPSHUR COUNTY — McGinley Corp.'s Reeves-Truitt 1, L. B. Brown sur, rig.

VAN ZANDT COUNTY—Warren T. Daniel et al's Cumbie 1, John Wright sur, elev 467 ft, Pecan chalk 1690-1730 ft, sd 2275 ft. J. C. Fore & Geo. L. Pace's P. S. Hand 1, Wm. Sherman sur, elev 564 ft, Pecan chalk 2420-44 ft, Austin chalk 3452-3893 ft, top Woodbine 4451 ft, dr 4610 ft. Hart Pet. Co.'s M. L. Cox 1, A. C. Nugent sur, sp and sd. Kelly O&G Co.'s Lunsford 1, J. Conner sur, A-151, sd 2300 ft. Neil McElroy et al's R. W. Murphy 1, H. Bailey sur, sd 2700 ft. Texas Chief Oil & Roy. Corp.'s Foster 2, F. Montgomery sur, lcn. Van Oil Assn.'s J. C. Tankersley 1, L. Landers sur, sd 2000 ft. Wittmer O&G Properties' R. W. Beggs 1, H. W. Raquet sur, sp and sd.

VAN FIELD—Cranfill & Germany's Swain (5-ac strip) 1, sp and sd. F. & M. Drlg. Co.'s Flanagan (1-ac strip) 1, M. Gross sur, lcn. Hartt Pet. Co.'s Swain (2-ac strip) 1, sp and sd. Helms et al's C. E. Bogue 1, M. University sur, elev 461 ft, sd 2843 ft. Humble O&R Co.'s L. V. Freeman 2, dr 1855 ft. Pure Oil Co.'s A. D. Clark (2-ac) 8, dk; A. D. Clark (36-ac) 6, top Pecan chalk 1553 ft, Austin chalk 2351-2553 ft, dr 2790 ft; Clark 7, top Austin chalk 2374 ft, testing 2949 ft; Davis 1, dk; Wylie Enos 1, Pecan chalk 1657-1735 ft, top Austin chalk 2510 ft, flowing by heads 2858-2936 ft; R. A. Enos 1, dk; R. A. Howell (47-ac) 3, Pecan chalk 1522-1622 ft, top Austin chalk 2340 ft, crooked hole 2396 ft; I. D. Miller 2, lcn; R. H. Peters 3, dk; L. A. Smith 2, lcn; F. B. Smith 3, lcn; W. F. Swain (20-ac) 4, dk; W. F. Swain (40-ac) 2, sd 2924 ft; O. L. Swain (80-ac) 3, lcn; A. G. Tunnell (50-ac) 2, top Pecan chalk 1704 ft, dr plug 2802 ft; Wells 5, dk; R. L. Wells & A. G. Tunnell 2, lcn. Sun Oil Co.'s Thompson 3, top Pecan chalk 1722 ft, top Austin chalk 2146 ft, dr 2435 ft. Roy Stumpff et al's L. K. Riggs (3-ac strip) 1, elev 455 ft, dk. The Texas Co.'s R. A. Tunnell (100-ac) 5, lcn. Vantex Oil Co.'s L. A. Smith (2-ac strip) 1, dk.

WOOD COUNTY—Wood County Dev. Co.'s Ricks 1, D. Fuller sur, rotary moved off, td 1000 ft.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abondoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr — straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
GLASSCOCK COUNTY—		
F-H-E Oil Co., J. W. Meek 1	*	3170
TOM GREEN COUNTY—		
Phillips Pet. Co. et al, Jennings-Gulden 1	*	5010
PECOS COUNTY—		
J. R. Bell et al, H. J. Eaton 1	*	1750
SCHLEICHER COUNTY—		
Delmar Oil Co., O'Harrow 1	*	5745

ANDREWS COUNTY—Deep Rock Oil Co. et al's Kuykendall 1, elev 3217 ft, top anhydrite 1678 ft, top salt 1720 ft, dr 3010 ft.

BREWSTER COUNTY—Trans-Pecos O&G Co.'s Jones 1, elev 3073 ft, ur 2620 ft.

COCHRAN COUNTY—Continental Oil Co.'s Slaughter 1-B, rig. Penn Oil Co. and Kiskadden's Slaughter 1, lcn.

COKE COUNTY—Reid-Hitchens & Stanolind O&G Co.'s Duncan 1, materials.

CONCHO COUNTY—A. W. Turner-Cromwell & Wesner's Brosig 1, sd 1520 ft.

CRANE COUNTY—Continental Oil Co.'s Cowden 1-C, elev 2559 ft, top salt 690 ft, dr 2320 ft. Cranfill Bros. Oil Co. et al's J. T. Muir 1, elev 2499 ft, top salt 485 ft, top white lime 2330 ft, dr 3955 ft. Cranfill & Gulf Prod. Co.'s J. B. Tubb 1, elev 2526 ft, salt 505-1400 ft, top brown lime 1410 ft, top white lime 2455 ft, fsh liner and spraying oil and gas, td 4488 ft. C. C. Duffey & Gulf's Cowden 1, lcn.

CROCKETT COUNTY—J. W. Dieringer et al's Barnscorew 1, elev 2519 ft, top salt 955 ft, dr 2245 ft. Taylor-Link Oil Co.'s M. Bullock 1, top salt 1090 ft, sd 2300 ft.

CULBERSON COUNTY—Cranfill Bros. Oil Co. et al's Mrs. J. P. Seay 1, dr 155 ft. Grisham-Hunter Corp.'s Warren 2, sd 1520 ft. W. L. Kornrumpf et al's Garren 1, sd 1180 ft.

DAWSON COUNTY—R. A. Albaugh et al's John Robinson 1, sp and sd.

ECTOR COUNTY—Galt-Brown Co. & Penn Oil Co. Unit Plan's Cowden 1, materials. South-

ern Crude Oil Pur. Co.'s Cowden 1, elev 3065 ft, top anhydrite 1782 ft, dr 1810 ft. H. F. Wurtz et al's Ibbetson 1, elev 2840 ft, top salt 865 ft, dr by bit 3280 ft.

EDWARDS COUNTY—Phillips Pet. Co.'s Holman 2, dr 7060 ft.

EL PASO COUNTY—Tri-State Oil Co.'s Louis Bobdalla 1, materials.

FISHER COUNTY—Condor Pet. Co. & Humble O&R Co.'s Wilson 1, elev 1879 ft, set cas 2945 ft. Cranfill & Reynolds Co.'s Flannigan 2, sd 3130 ft; Willingham 3, sd 3090 ft. Roeser-Pendleton, Inc. & Amerada's Ribble 1, rig; Littleton 1, dr 1840 ft. The Texas Co.'s Stephens 2-A, elev 1936 ft, dr lime 3206 ft; M. Teagarden 2-B, elev 1870 ft, dr 3165 ft.

GARZA COUNTY—Penn & Porsey's J. D. Justice 1, dk.

GAINES COUNTY—Texas Consolidated Oil Co. & T. P. Coal & Oil Co.'s E. H. Jones 1, elev 3636 ft, sd 730 ft.

TOM GREEN COUNTY—Cromwell et al (was Belding & Dutton's) Norsworthy 1, sd 765 ft. Pratt & Hancock's Lewis 2, sd 200 ft.

HOWARD COUNTY—Continental Oil Co.'s Eason 2, dr 1515 ft.

HUDSPETH COUNTY—G. R. Theison et al's University 1, sp and sd.

IRION COUNTY—Chas. Denny & W. R. Andrews' Tankersley 1, sp and sd. Central Oil Co. (W. E. Newton's) H. Horney 2, dr 1330 ft. Stanolind O&G Co.'s W. H. Williams 1, dr 565 ft. Straughn & Texannati Oil Co.'s Tankersley 1, elev 2306 ft, sd 1473 ft. F. E. Webb et al's Williams 1, elev 2363 ft, sp and sd.

JONES COUNTY — Bonds-Trout-Julian & Gulf Prod. Co.'s M. J. Williams 1, sp. J. B. Jameson et al's S. W. King 1, fsh 960 ft. J. L. Hart (was McBest et al's) Roberts 1, sd 1000 ft. Shaheen Oil Co. & Duffy's King 1, elev 1652 ft, set cas 1917 ft. Shaheen & Union Oil Co.'s B. King 1, machine. Sam Yingling et al's L. R. Cade 1, dr 2540 ft.

LOVING COUNTY—The California Co.'s J. G. Allen 2, lcn; Reagan-McIlvain 6, top salt 740 ft, dr 4225 ft; Reagan 7, top salt 780 ft, dr 2050 ft. Carl Cromwell & Atlantic Oil Prod. Co.'s Russell 1, top salt 750 ft, dr 2700 ft. Folbre & Evans' D. P. Dean 1, lcn. Henshaw et al's Reagan 2, rig. Pete Hoffman et al's Ramsey 1 and 2, lcns. Lewis & Slagel Drlg. Co.'s Cartwright 1, dr 555 ft. C. H. Lockhart et al's F. W. Hubbard 1, rig. Lockhart & Co.'s Allen 4, top salt 724 ft, dr 3325 ft. Miller-Burge & Healy's Chapman 1, top salt 750 ft, top Delaware 4285 ft, dr by tools, td 4356 ft. H. W. Martin et al's Jim Wheat 1, abn lcn; Wheat-Ramsey 1, dr 410 ft. Rush-Anderson & Moor's Wheat 1, dk. West Texas Pet. Corp. (was Eppenauer et al's) J. G. Allen 2, cellar.

MENARD COUNTY—L. G. Priest et al's Sorrell 1, elev 2279 ft, dr 2665 ft.

MITCHELL COUNTY—Lewis-Slagel Drlg. Co.'s Bell 1, elev 2278 ft, top lime 1700 ft, sd for shot 2827 ft. J. R. Bell et al's H. J. Eaton-Sun 1, dr 315 ft. J. R. Bell & Humble O&R Co.'s Scharf-Blackman 1, elev 2426 ft, top salt 940 ft, sd after show, td 1624 ft. Charlesworth- Messenger Oil Co.'s Butz 1, elev 2519 ft, sd, making gas 1282-90 ft. E. L. Chapman et al's Streety 1, elev 2563 ft, sd 2210 ft. C. L. Dittman Drlg. Co. et al's Eaton 2, lcn; Easton (Sec. 37) 1, elev 2433 ft, top salt 945 ft, sd 1282 ft; Jackson 1, machine. Humble O&R Co.'s H. L. Kokernot 1, elev 3593 ft, top salt 2713 ft, top black lime 3981 ft, reaming hole to fsh for tools, td 6170 ft. L. B. Lancaster et al's H. J. Eaton-Pure 1, lcn. Magnolia Pet. Co.'s Eaton 1, machine. B. C. Mann et al's Scharff-Blackman 1, top salt 675 ft, dr 1470 ft. McCarty Oil Co.'s Gray 3, making oil, cas collapsed 1437 ft. J. R. Miller et al's Bennett 1, set cas 1735 ft. J. D. O'Mara et al's Bennett 1, elev 2508 ft, sd 1230 ft. Penn Oil Co. et al's J. B. Alvis 1, show gas 915 ft, dr 1030 ft. O. J. Perren et al's Eaton 2, elev 2437 ft, fsh 1765 ft. Pure Oil Co.'s Harrison 1, elev 3495 ft, top Delaware 4265 ft, sd 5000 ft. Rio Grande Oil Co. (Lockhart's) R. D. Webb 1, top lime 2717 ft, show oil 3195-3200 ft, dr 3300 ft. Riser & White's Riser 1, sd 500 ft. Eric Schelling & Slaughter's Yates 1, sd 340 ft. Sides & Cloyd's Blackman-Slaughter 1, pb from 3405 to 3103 ft. Southern Crude Oil Pur. Co.'s Scharff-Blackman 1, top salt 865 ft, dr 2035 ft. Williams & Moran's Heiner-State 1, elev 2528 ft, dr 1520 ft.

REAGAN COUNTY—Big Lake Oil Co.'s University 179, sd 4003 ft; University 6-C, lcn. Group One Oil Corp.'s University 4-B, dr hard shale and sandy lime 8462 ft.

REEVES COUNTY—The California Co.'s Kloh 2, dr 370 ft.

RUNNELS COUNTY—Chas. Dutton et al's G. W. Dean 1, fsh 2315 ft.

SCHLEICHER COUNTY—Delmar Oil Co.'s O'Harrow 1, abn 5745 ft. Eastland Oil Co. et al's Tisdale 1, dr 200 ft. Munger-Wilson Oil Co.'s Page 1, elev 2270 ft, sd 5053 ft. Paul Teas & Walter Gant's Allison 1, elev 2311 ft, dr 4035 ft. J. D. Wesner et al's R. E. Ratliff 1, sd 750 ft.

SCURRY COUNTY—Camp Springs O&R Co.'s Strayhorn 1, sd 875 ft. R. B. Pender O&G Co.'s Davis 1, elev 2208 ft, top salt 445 ft, sd 5000. Scurry County Oil Exchange's Earnest 1, cellar. Seifert & Dibble's Blackburn 1, top salt 720 ft, dr 2205 ft.

STERLING COUNTY—W. C. Beesley et al's W. L. Foster 1, elev 2518 ft, ur cas 655 ft.

TAYLOR COUNTY — Adams-Ferguson & Hobbs' Lowe 3, elev 1918 ft, rig. Eastland Oil Co. et al's Hunter 2, elev 1874 ft, pb from 2750 ft to 2398 ft. Geo. Goodrun et al's A. Ackers 1, lcn. J. B. Jameson et al's Webbs 1, elev 1905 ft, re-cemt 3-in cas 6251 ft. Sanger et al's Abilene Fee 1, dr 2005 ft. Sanger O&R Co.'s Osborn 1, rig.

TERRELL COUNTY—Big Bend Oil Corp. et al's Bassett 1, elev 2396 ft, sd 2670 ft. Mid-Kansas O&G Co.'s Goode 1, elev 2405 ft, fsh 5455 ft.

VAL VERDE COUNTY—O. O. Owens et al's Mills 1, elev 2130 ft, sd 5780 ft. Phantom Oil Co.'s Ingram 1, sd 3035 ft.

UPTON COUNTY — Bennett Oil Co. (R. H. Gill's) Shirk 1, top salt 1260 ft, top brown lime 2720 ft, top white lime 2750 ft, dr 2855 ft. C. F. Corzelius et al's Shirk-Tidal 1, top salt 1015 ft, dr 1500 ft. C. C. Duffey et al's McClintic 3, top salt 1100 ft, dr 2110 ft. Eppenauer Drlg. Co. et al's Chaney 5, top salt 710 ft, top lime 2255 ft, testing with 400 ft oil in hole 2433-33½ ft. Gulf Prod. Co.'s McElroy 90, top salt 1130 ft, dr 2670 ft; J. H. Shirk 1, top salt 1045 ft, top lime 2462 ft, co to pump 2490-2865 ft. Humble O&R Co.'s Damron 1, top salt 1230 ft, top brown lime 2868 ft, top white lime 2910 ft, dr 3135 ft; Ricker 15, top salt 525 ft, dr 1585 ft. Penn Oil Co. & Shell Pet. Corp.'s Halamacek 1, elev 2806 ft, top salt 1568 ft, dr 1960 ft. TP Coal & Oil Co.'s King 1, top salt 1150 ft, sd 2345 ft. Weekly Oil Corp. et al's McClintic 1, top salt 1090 ft, flowed 186 bbls oil 12 hrs after shot 500 qts 2855-3004 ft; Shirk 1, elev 3086 ft, top salt 1025 ft, top lime 2495 ft, testing with 700 ft oil in hole 2645-2714 ft.

WARD COUNTY—California Co. & Atlantic's S. R. Allen 1, top salt 2296 ft, top lime 2433 ft, dr 2580 ft. Empire Gas & Fuel Co.'s Sealy 1, elev 2654 ft, top salt 1175 ft, top lime 2320 ft, fsh tools 2530 ft. Grand Falls Oil Co.'s Blair-Boogher 1, top salt 765 ft, testing with 1500 ft oil in hole 2135-2230 ft. Gulf Prod. Co.'s Hutchings 6, top salt 1155 ft, dr 2377 ft; O'Brien 16, dr 475 ft. J. G. Kugle et al's Chas. Wallis 1, ur 8¼-in cas 1625 ft. Magnolia Pet. Co.'s Atlantic-Sealy 1, dr 375 ft. R. F. Owen et al's Johnson 1, elev 2499 ft, sd 1200 ft. Prairie O&G Co.'s G. P. Hill 1, dr 110 ft. Rector Oil Co.'s Boogher 1, top salt 790 ft, flow heads after shot 40 qts 2170-2200 ft, td 2230 ft. Rickford & Smith's Johnson 1, elev 2441 ft, top salt 798 ft, sd 1000 ft. Paul Ryan et al's E. R. Allen 1, machine. Shipley Oil Corp.'s Hayzlett 5, dr 610 ft; Monroe 1-A, elev 2655 ft, top salt 2485 ft, fsh 3780 ft. TP Coal & Oil Co.'s H. James 1, top anhydrite 740 ft, top salt 1015 ft, top lime 2025 ft, sd flow heads oil 2305-55 ft.

WINKLER COUNTY—Magnolia Pet. Co.'s M. J. Bashara 1, top anhydrite 829 ft, top salt 996 ft, dr 2180 ft; J. B. Walton 1, dr 440 ft.

Wildcatting Changed in Los Angeles Basin

Los Angeles. — A gradual shift in wildcatting activities in the Los Angeles basin has been observed during the past few weeks, with efforts to find field extensions and the trend toward drilling about midway between fields taking precedence over theories that structures entirely out of line may prove productive. The major companies have been more cautious in the selection of wildcat locations than the smaller companies, but even the larger operators took long chances during the more prosperous times.

The Texas Company has started work on its test about two miles west of the Montebello field, Section 4-2-12. Other wells have been drilled nearby, but most of these were abandoned at nominal depths.

George F. Getty is drilling at 3700 feet in Sunny Side Heights 1, a wildcat test about one and one-half miles northwest of the Athens-Rosecrans field and also in line with the Potrero field, a short distance to the northwest.

The Texas Company is drilling at 1000 feet in Olive Community 1, near Olive and a short distance south of the Richfield field.

Standard Oil Company is trying for deep production in the old Newport field, which barely produced oil in commercial quantities at its very best. This well has reached a depth of 3225 feet.

PERMITS

(*Continued from page 87*)

WINKLER COUNTY — Lion Oil & Refg. Co., El Dorado, Ark., T. G. Hendrick, A, 160, 7, S 41, Blk. B5, 330 ft from s and 990 ft from w line sw¼.

WILLIAMSON COUNTY—McNeill & Mathews Inc. & Chapman, Taylor, S. E. Lane, 44, 1, T. E. Shell sur, 210 ft s of center of n line. Southern Prod. Co., Rockdale, O. Simmons, 4, 2, H. Owen sur, 150 ft from s and e lines. R. S. Wilson, Taylor, J. A. Walker, 206, 1, T. A. Graves sur, 150 ft from ne and 600 ft from w line.

YOUNG COUNTY—Jacob Oil & Gas Co., Graham, N. Finch, 40, 1A, 38, TE&L sur, 185 ft from w and 150 ft from n line. King Royalty Co., Wichita Falls, J. Graham, 40, 11, 2249, TE&L sur, 150 ft from s and 58 ft from w line.

ZAPATA COUNTY—J. L. Newton, Victoria, I. G. Trevino, 7, 1, Sec. 66, Blk. 7, 150 ft from s and w lines.

EAST TEXAS

HARRISON COUNTY — Shell Rock Pet. Corp.'s Daugherty 1, Burris sur, sd 3568 ft.

MARION COUNTY—Trammell et al's Hussey 1, Chas. Lockhart sur, elev 282 ft, top chalk 1771 ft, claim oil show in hd chalk near bot hole, cemtd 8-inch cas 1514 ft, sr to 1780 ft, ds stuck, pulled apart leaving 10 joints with bit and collar in hole, fsh and trying to go over with 6-inch cas, td 1878 ft (corrected depth). Rondeau & Hindman's McGaughery 1, W. J. Willis sur, lcn.

PANOLA COUNTY—Knott et al's Marion Durham 1, Chas. Haley sur, 6⅝ cas 2670 ft, set short string 5 3/16 cas 11 ft off bot, tested est 50,000 ft gas, hfsw wo, td 2988 ft. Smith et al's Hunt 1, Albert Johnson sur, dk. Bell et al's Burnett Lbr. Co. 1, S. B. Hendrick sur, 8⅝ cas 2027 ft, washed to bottom arr resume, td 2863 ft. Creighton & Hart's Kyle 1, J. Tippett sur, elev 349 ft, top chalk 1444 ft, top Blossom 2216 ft, sd in lime 3704 ft. Warren & Dawes' McNeese 1, A. Booker sur, dk. Dillon & Bradham's Baldwin 1, Hampton West sur, sp 12½ cas 43 ft. Texas La. Prod. Co.'s Baker 1, B. C. Jordan sur, 9-inch 3450 ft, cemtd 6⅝ cas 4575 ft. Natural Gas Prod. Co.'s

H. H. Alvord 1, B. C. Jordan sur, 10-inch 1160 ft, dr lime 3820 ft (no recent report); Roquemore 4, B. C. Jordan sur, rig up for Trinity zone test, td 966 ft. Daisy O&G Co.'s Rucks Hrs. 1, Jno. Palmer sur, 12½ cas 180 ft, dr 600 ft.

SABINE COUNTY—Loring Oil Co.'s Nona Mills Lbr. Co. 1, Jas. Mason sur, ta 4803 ft.

SHELBY COUNTY—Chapparral Oil Co.'s Holt 2, Matthew Moore sur, fsh junk 3105 ft.

SOUTH TEXAS

ATASCOSA COUNTY—Loyd Bender et al's Duderstadt 1, (nw corner of county near Bexar County line) sd 2280 ft in Edwards for orders. Gardiener and Mathis (Chattanooga, Tenn.) 1 in Amphion section, to spud test before July 1, 1931.

BASTROP COUNTY—Bolling et al's (Chas. Long) McWilliams 1, Geo. T. Glasscock sur, near L. I. Dodwell Brundige 1, sd 2240 ft. Pacific Oil & Gas Co.'s Litton 1, sd at 2520 ft.

BEE COUNTY—Union Producing Co.'s Ray 26, Pierce Miller sur, casing set at 3941 ft, bottom of hole 3951 ft, prep to dr in. Barnsdall Oil Corp.'s Roberts 2, Cosden area, lcn. Simms Oil Co.'s Holzmark 2, 5 mi. sw of Nichols pool, set casing at 3778 ft, bottom of hole at 4458 ft, plugged back to complete as gasser. Independent O&G Co. and Moody Seagraves Producing Co.'s Welder 1, 8 mi se of Beeville, coring and drilling about 4865 ft. Grayburg Oil Co.'s Kimball 1, 7 mi sw Pettus, lcn.

BEXAR COUNTY—Penn Oil Co.'s Cooksey 2, 400 ft nw of No. 1, discovery test, lcn, to spud immediately. Penn-Tex O&G Co.'s Dobrowolski 4, in gas area, Dobrowolski pool, to make lcn. F. W. Tong's Willie Sandemer 1, John Montez sur, sd 1170 ft for orders.

CALDWELL COUNTY — Blount & Mills' McMahon 1, Pinchback sur, fsh at 2160 ft, showing considerable oil.

DE WITT COUNTY — Shell Pet. Corp.'s Fritz Junker 1 (formerly Penn Oil Co.) set 6⅝ inch casing at 5457 ft, preparing to deepen.

DUVAL COUNTY—Frasher & Schoolfield's Duval Land Co. 2, Schoolfield and O'Brien area, lcn. Vacuum Oil Co.'s Duval County Ranch lands 1-A, 6 mi sw of SRC pool, dr below 2400 ft. Al Buchanan et al's Wood-Welder 1, 9 miles ne of SRC pool, sd 1530 ft for orders; Wood-Welder 2, to make lcn. Frasher & Breeding's Bishop Land Co. 1, dk up. Magnolia Pet. Co.'s Wilson 1, (Bishop Land Co.) Sur 28, casing set at 2240 ft, bottom of hole 2245 ft, showing considerable gas. Gulf Production Co.'s Schaeffer 1, Sur. 32, no report.

EDWARDS COUNTY—Phillips Pet. Co.'s Hollman 2, dr 6750 ft.

FRIO COUNTY — United North & South Dev. Co.'s Little 2, in ne part of county near Medina Line, total depth 1757 ft, bailed dry after standing several days, will make second test. A. H. Wray et al's Burns 1, Antone Hutzler sur, prep to set casing to test show in two saturated cores. Edwards topped at 2662 ft, total depth 3708 ft. May make gasser.

GOLIAD COUNTY—Union Producing Co.'s Ray 28, set 10-inch csg at 435 ft.

HAYS COUNTY—Harley & Whittington's Heidenreich 1, near Kyle, coring oil and gas show encountered at 2288 ft.

JACKSON COUNTY—Trinity Drillers' Hungerford 1, 2 miles east of Edna Gas Field, dr at 4000 ft, encountered Lagarto at 28 ft.

JIM HOGG COUNTY—Cole Pet. Co.'s Allen 1, on La Josefina ranch, six miles ne of Randado field, tested oil sand at 3170-86 ft, casing set and bailed dry, later showed small amount of fresh water and slight odor of oil.

KARNES COUNTY—Fort Bend Oil Co.'s Newberry 1, swabbed dry and closed in. Shows 100 pounds pressure at 2992 ft. J. Morrissey's Cochran 1, sd 1012 ft.

KERR COUNTY—Evans & Gant's Seiker & Mears 1, 3 miles ne of Love well, dk being built, machinery on ground.

LAVACA COUNTY—Cranfill & Reynolds' Hermes 1, William Ryan sur, lcn.

LIVE OAK COUNTY—Houston Oil Co.'s Ross Boothe 1-A, in Lucas gas area, running tubing and setting liner in attempt to bring in as producer at 5270-75 ft; Cartwright 22, just east of Lucas field, attempting to shoot off drill stem at 6023 ft; Brown Cattle Co. 3, nw cor of M. B. Kivlin sur, dr 1583 ft in sticky shale; Brown Cattle Co. 4, sw cor of M. B. Kivlin sur, spudded. Jacobs, Buzzini & Pickett's Key 1, 5 miles e of George West, cored dry sand at 2780-2785 ft.

NUECES COUNTY—Moody-Seagraves Producing Co.'s Smith 1, in Saxet field west of Corpus Christi, attempting to kill well at 4088 ft to drill deeper. Made large gasser with 1850 lbs. pressure at that depth. Houston Oil Co.'s Hunter 1, 5 miles west of Corpus Christi in Saxet field, casing set at 4066 ft, total depth 4079 ft, showed considerable oil and great deal of gas on drill stem test. Saxet O&G Co.'s State National Bank 1, in Saxet area, plugged back from sand at 5515 ft, casing set at 2452 ft, drilled in but cement had not hardened, recemented, to drill in again within a few days. Grim and Yakey's William Bauer 1, north of Robstown, tested dry sand at 2650 ft, another at 2770 ft, now coring. Houston Oil Co.'s Ollie Purl 1-B, Agua Dulce field, dk blt, new lcn. H. H. Weinert's Mohle 1, sd 452 ft. Callalen Oil Co.'s 2, Farias sur, sd 2100 ft. Bowers et al's Pryor 1, Stevens sur, sd 400 ft.

REAL COUNTY — Evans and Sprinkle's Marcus Aul 1, 5 miles nw of Love producer, dr about 185 ft. McGinley Oil Corp.'s Haby 1, seven miles s of Love producer, waiting on csg abt 400 ft.

REFUGIO COUNTY — Morgan & Rutherford's Rogers 1, 3 miles w of Refugio, dr 3626 ft. Houston Oil Co.'s Rooke 1-B, several miles southwest of production, making drill stem at 6194 ft, several test attempts have failed. C. F. Nichols et al's Wood 1, near Bee County line, dr 3680 ft.

SAN PATRICIO COUNTY — Saxet O&G Co.'s Rachel 17, White Point field, plugged back from 6000 ft to 4903 ft, set 22 ft of screen, now preparing to swab, originally made gasser and oil well at 4872-4892 ft. Cosden Oil Co.'s Powell 1, 1 mile e of Odem, sd 4530 ft, dr new water well; Ramsey 1, sd 4118 ft, contract depth, wait on orders. La Feria O&G Co.'s Smith 1, sd 4190 ft. Peterman et al's Crow 1, sd 4100 ft. Saxet O&G Co.'s Carroll 1, rigged up, no later report.

STARR COUNTY — Kusk and Duerkson's Kelsey-Bass 1, dr 800 ft. Kenyard et al's Sealbury 1, set casing at 349 ft, prep to dr in. Los Olmos Oil Co.'s Kelsey Bass 1, sd 271 ft.

UVALDE COUNTY — Phantom Oil Co.'s Claudt 1, sd 2710 ft. Waldrup and Welch's Benson 1, sd 1620 ft.

VICTORIA COUNTY—Attee Drilling Co.'s West 1, 3 miles ne Nursery, sd 1820 ft, last report.

WEBB COUNTY — Usher Carson's Benavides, sur 1613, dr abt 910 ft. O. W. Killam's Bruni 1, sur 77, dr 2812 ft.

WILSON COUNTY—Rycade Oil Co.'s Johnson 1, J. M. Balmastta sur, dr 2830 ft in hard Taylor. Stever & Wren's Reuse 1, Trevino sur, dr around 1700 ft.

ZAPATA COUNTY—National Oil Co.'s 1, Jose Vasquez Borrego grant, to make lcn. O. W. Killam's Slater 3, prep to spud. Mackenzie & Talmadge's 1, dr about 800 ft. W. M. Marks' Flores 1, dr 1390 ft. Neilson & Courtney's Luther 2, (formerly National Oil Co.) prep to spud. J. J. O'Hern's Benavides 2, Carta Blanco Ranch, Villa Grant, lcn. Penny Production Co.'s Cuellar 1, sd 1867 ft. B. F. Nixon's Guttierrez 1, sd 50 ft.

TEXAS GULF COAST

AUSTIN COUNTY—Ark. Nat.'l Gas Co.'s Machemehl 1, 2½ mi n Bellville, sh 2300 ft. O'Hara et al's Schrader 1, sh 3290 ft. Empire G&F Co.'s Kunze 1, San Felipe, sn 5504 ft.

BRAZORIA COUNTY—Thos Faust et al's Fee 6, 2 mi n Nash Dome, sh 5960 ft. Steele & Strickland's Lochridge 1, Lochridge, sd 50 ft Rycade Oil Co.'s Wisdom 27, Nash Dome, su 5580 ft. Rycade & Amerada's Seaburn 2, Stratton Ridge, shale 5580 ft. Freeport Sulphur Co.'s Fee 2001, Bryan Mound, shale 4300 ft. The Texas Co.'s Ewing 1, Manvel, prep to sdtr at 7160 ft. The Texas Co.'s Murdock 1, Fresno, shale 7450 ft. Layne et al's Wisdom 7-A, shale 2820 ft oil odor. Mills Bennett Prod. Co.'s Randon 2, odor oil, shale 2730 ft; Reese 2, anhydrite 2600 ft. United Oil Synd.'s Speer 1, 3 mi west Danbury, sd 570 ft.

CHAMBERS COUNTY—Pure Oil Co.'s Lost Lake 5, Lost Lake, stdg 5870 ft; Shell Pet Co.'s Herff 2, Moss Bluff, sn 6110 ft. Chicago Oil Corp.'s Lawrence 1, 10 mi s Barbers Hill, sd 5010 ft.

FORT BEND COUNTY—Gulf Prod. Co.'s Davis 61, Big Creek, gumbo 1840 ft. Long Point Oil Co.'s Fee 1, Long Point, gumbo 500 ft.

GALVESTON COUNTY—Gulf Prod. Co.'s Smith 10, High Island, washing to bottom 6010 ft.

GRIMES COUNTY—Wainwright-West Oil, Ltd.'s Templeman 1, 6 mi s Navasota, sh 3510 ft.

HARDIN COUNTY—D. O. Speights' Gidrey 1, 4 mi s Batson, sd 3010 ft. The Texas Co.'s Fee 307, Sour Lake, prep to make test 3000 ft.

HARRIS COUNTY — Humble O&R Co.'s Minnetex 4, Mykawa, sn 5200 ft; Gehring 1, shale 4600 ft. Cypress Oil & Dev. Co.'s Kitzman 2, 2 mi n Cypress, shale 4400 ft. Gulf States Oil Co.'s Augsperger 1, sd 3920 ft.

JACKSON COUNTY — Jackson Oil Synd.'s Lee 2, Edna, sd 4140 ft. Warner-Quinlan's Hungerford 1, Edna, gumbo 400 ft.

JEFFERSON COUNTY — The Texas Co.'s Pipkin 4, Big Hill, rock 2930 ft. Humble O&R Co.'s McFadden 1, 6 mi e of Big Hill, dr plug 280 ft. Keith et al's Reed-Hankamer 1, 3 mi ne Westbury, shale 2030 ft.

LIBERTY COUNTY—Hamm et al's Harvard 1, Davis Hill, gumbo 1010 ft. J. B. Ingram's Hornbeck 1, 2 mi s Cleveland, clay 80 ft. Harrison & Abercrombie's Blewett 1, N. Dayton, ws 4110 ft. Harrison Oil Co.'s Quinterte 4, n Dayton, shale 4440 ft. Harrison & Abercrombie's Jones 1, n Dayton, abn 4300 ft. Gulf's Ezzell 1, Hankamer, sn 6730 ft. Tucker et al's Bell 1, Dovers, gumbo 550 ft. Cranfill-Reynolds' Esperson 5, Esperson Dome, shale 6420 ft. Yount-Lee O-I Co.'s Moores Bluff 3, reset screen 6980 ft. Gulf Prod. Co.'s McFadden 3, Moss Bluff, gumbo 2070 ft. Humble O&R Co.'s Sterling 7, Moss Bluff, ru; Braeden 2, Moss Bluff, dk.

MATAGORDA COUNTY — Empire G & F Co.'s Boker 1, Citrus Grove, pulling screen 6290 ft. Cockburn Oil Corp.'s Hawkins 2, Shepherds Mott, sdtr at 2210 ft.

MONTGOMERY COUNTY—Price & Wilhite's Juergus 2, 3 mi Conroe, stdg. Lake Creek Oil Co.'s Hunt 1, s Conroe, sd 670 ft Rycade Oil Corp.'s Drought 1, J. Connor sur, sd 250 ft.

ORANGE COUNTY—Gulf Prod. Co.'s Miller-Vidor 1, 2 mi n Vidor, clay 40 ft.

WASHINGTON COUNTY—Yequa Oil Co.'s Graves 1, 3 mi n Independence, dk. Penn-Tex Oil Co.'s Kansas 2, Brenham, ru. Sun Oil Co.'s Janner 4, Clay Creek, anhydrite 3630 ft; Freeman 1, Clay Creek, anhydrite 3150 ft; Grimm 1, Clay Creek, comp for 480 bbls. oil at 1220 ft.

WHARTON COUNTY—Givan et al's Huddins 1, t.a. C. S. Thomas' Velney 1, Boling, t.a.

SOUTH LOUISIANA

ACADIA PARISH — Yount-Lee Oil Co.'s Houssiere Latrielle 9, Evangeline, reaming to bottom.

ASSUMPTION PARISH — Texas Gulf Sulphur Co.'s Dugas & LeBlanc 4, Napoleonville, gumbo 410 ft; Dugas & LeBlanc 5, Napoleonville, sn 275 ft.

AVOYELLES PARISH — M. L. Vincent's Morrow 1, sd 4220 ft.

CALCASIEU PARISH—Wilfred Lahay's Jardell 1, 2 mi ne Vinton, sh 2675 ft. J. O. Davis' Lumber Co. 1, 8 mi n Starks Dome, sd 6550 ft. Vacuum Oil Co.'s Waite 1, 2½ mi nw of Iowa, water sn 3190 ft. Union Sulphur Co.'s Moss 1, Lockport, abn 6620 ft. Dr. Thomas et al's Hewitt 1, 2 mi ne Edgerly, lcn. Crawford Doyle Tr.'s Johnson 1, nw flank Starks Dome, sd 370 ft.

CAMERON PARISH—Pure Oil Co.'s Yount-Lee 10, Sweet Lake, sh and lime 4820 ft. Shell Pet. Co.'s Watkins 16, Black Bayou, sh 2080 ft; Black Bayou State 2, sp in; Yount-Lee 6, Black Bayou, gypsum 1060 ft. The Texas Co.'s Calcasieu Lake State A-6, Calcasieu Lake, fsh 2770 ft; Calcasieu Lake State 7, lcn. R. E. Seiss Tr.'s Vincent 2, Hackberry, sd 500 ft.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Peigneur 10, Jefferson Island, set 6⅝-in cas 1700 ft. The Texas Co.'s Vermilion Bay 6, Vermilion Bay, ru.

IVERVILLE PARISH—Gulf Ref. Co.'s Gay 1, Bayou Choctau, set 13⅜-in cas 3300 ft. Standard's Wilbert 8, Bayou Des Glaise, sn 3900 ft; Wilbert 7, Bayou Blue, no report; L. Baist 1, Bayou Blue, dk fdn; Schwing 1, Bayou Blue, gumbo 5010 ft; Schwing 3, Bayou Blue, sd while rig is being moved to No. 5 for work-

over. Shell Pet. Co.'s Wilbert 5, White Castle, set 6⅝-in cas 5200 ft. Well blew in small amount dry gas and is now bailing wash water and b.s. Prep to make survey. Texas Gulf Sulphur Co.'s Wilbert 6, Bayou Choctau, dr canal; Wilbert 7, lime 520 ft.

JEFFERSON PARISH—H. T. McClain et al's Trumbell Atterbury 1, Welsh, sh 3040 ft.

PLAQUEMINES PARISH—Gulf Ref. Co.'s Buhas Levee B-2, Rose Dome, small amount gas 830 ft, prep to set cas. Humble O&R Co.'s Cockrell-Moran 2, Lake Grande Ecalle, slight oil show 3840 ft. The Texas Co.'s Garden Island Bay 4, Garden Island, sh 4450 ft; Garden Island 5, lcn.

ST. JAMES PARISH — Convent Oil Co.'s Jacobs 1, sd 1834 ft.

ST. LANDRY PARISH — Gulf Ref. Co.'s Haskins 4-A, Port Barre, set 10-in cas 835 ft.

ST. MARTIN PARISH—Harrison-Abercrombie's Barras 1-A, gumbo 1100 ft. The Texas Co.'s Iberville 3, Hager Dome, sn 650 ft; St. Matin Land Co. 5, Hager Dome, sn 3390 ft. Rycade Oil Co.'s Woodyard Lake 1, Bayou Bouillon, set 9⅝-in cas; State 4, Bayou Bouillon, fsh 4470 ft.

ST. TAMMANY PARISH — Washington & St. Tammany Dr. Co.'s Coussack 2, sd 1550 ft.

TERREBONNE PARISH — Chas. Paggi's Evergreen 2, Houma, sd 1800 ft. La Gas & Fuel Co.'s Minor Estate 1, Houma, sn 3830 ft. The Texas Co.'s Bay Junop 2, stdg. 6830 ft; Caillou Island 4, lcn; Lake Pelto 4, dk; Lake Pelto 5, lcn; Lake Pelto 6, pumped small amount oil, will probably drill deeper; Bay St. Elaine 5, rock 1330 ft; Bay St. Elaine 6, lcn; Bay St. Elaine 1, w.o.r.; Lake Barre 6, lcn; Lake Barre 7, sh 3360 ft; Lake Barre 8, sn 1900 ft.

WEST FELICIANA PARISH — Putnam Synd.'s Como Plantation 1, sd 850 ft.

VERMILION PARISH—Pure Oil Co.'s La. Land Co. 1, gumbo 1360 ft.

NORTHERN LOUISIANA

Completions

Company, Well and Location		Initial Production Bbls.	Depth
CONCORDIA PARISH—			
Louisiana G&F Co., Saunders 2, 42-8n-10e		*	1528
SABINE PARISH—			
H. W. Perritt, Bowman-Hicks 1, 2-7-12		50	2288
Towery Drilling Co., Sabine Lbr. Co., 1, 12-7-12		170	2436
R. L. Gay, Tr., Bowman-Hicks 9, 18-7-13		*	2717

BIENVILLE PARISH—S. P. Borden et al's Thomas 1, 27-16-9w, bailed down 1000 ft and lost bailer, later lost ds, now fsh, td 4875 ft. Cagle Bros.' Lawhon 1, 15-16-8w, dr shale 2306 ft.

BOSSIER PARISH — Andrews & Davlin's Nattin 1, 15-22-14, 8-inch 1471 ft, sd 1576 ft. H. I. Morgan et al's Kendricks B-10, 22-19-11, tested sw thru ds 1829 ft, dr 1841 ft. Rambaugh et al's Allison 1, 10-19-13, dry 1100 ft, arr deepen.

CADDO PARISH—Texas La. P. L. Co.'s Wall 1, 33-23-16, cemtd 7-inch cas 5160 ft; French 1, sw nw 34-23-16, 7-inch cas 5102 ft, arr take 10 ft core, td 5512 ft. Junior O&G Co.'s Breard 1, 9-18-16, dr 2210 ft. Libby et al's Foster 1, 29-15-16, sd 1600 ft.

CATAHOULA PARISH—National Drilling Co.'s Marsh McMillian 1, 26-9-6e, 6⅝ cas 2796 ft, tested sw, sd 3086 ft.

CLAIBORNE PARISH—Baird Bros. et al's Whittaker 1, 30-20-7w, sd 2200 ft. Bough et al's Alexandria 1, 27-20-8w, sd 2200 ft. Prairie O&G Co.'s F. B. Shackelford 1, se ne 30-23-5w, elev 226 ft, 12½ cas 611 ft, top anhydrites 3889 ft, 9-inch 3918 ft, arr ds test in bro sand 4668-4689 ft. La. O. R. Corp.'s Langston 10, 19-21-7w, cemtd 9⅝ cas 2438 ft, dr plug.

CALDWELL PARISH—Hudson et al's Burton 1, 36-12-?e, sd 2507 ft, (corrected depth).

CONCORDIA PARISH — Louisiana G&F Co.'s Saunders 2, 42-8-10e, 12½ cas 182 ft, sw abn, td 1528 ft. Joe Marr et al's Maxwell 1, 35-3-8e, sd 3622 ft.

DE SOTO PARISH—J. W. Clark's Tidwell 1, 22-13-14, 6⅝ cas 2910 ft, tested sw show oil and gas 3130 ft, plugged back to 3125 ft, did not shut off sw, sd, old td 3130 ft. W. H. Weichert's H. Smith 1, 31-14-15, top gas sand 1653 ft, top chalk 1901 ft, sd in chalk 2220 ft. Standard Oil Co. of La.'s Hoell 1, 32-14-13, 10-inch 82 ft, dr sand and shale 2815 ft. Neff et al's Dowling 1, se se 18-13-14, base chalk 2040 ft, dr lime 2059 ft. Ramsay 1, 33-13-16, rig. S. A. Guy et al's Dowling Bros. 1, 31-14-14, sd 1354 ft.

LA SALLE PARISH—La. G&F Co.'s Tensas Delta B-2, sw ne 23-7-4e, 9-inch 982 ft, dr sandy shale 2158 ft.

NATCHITOCHES PARISH—C. M. Talley et al's Talley 1, 29-11-10, rig. Gulf Ref. Co.'s Bodcaw Lbr. Co. 1, sw ne 13-13-8w, 12½ cas 930 ft, dr bro shale 2495 ft. W. M. Coates et al's Collins 1, 28-9-10, base chalk 2612 ft, sd 3718 ft. J. W. Cooper et al's Cooper 1, 35-11-10, dr shale 2640 ft; Cooper 2-A, 35-11-10, top chalk 1400 ft, sd 1421 ft.

RED RIVER PARISH — Lucky Strike Oil Co.'s Chaffraix 1, 32-12-10, made ds test 2820-3010 ft, est 500 bbls sw and show light oil arr plug back to shut off sw, td 3010 ft.

SABINE PARISH—Pearce, Tr.'s Pearce 1, sw sw 10-7-11, 6⅝ cas 2339 ft, tested 150 ft oil hole, wo 2600 ft. Lawrence et al's Hubley 1, 21-7-11, sd 2650 ft. J. C. Walton's Sabine 1, ne nw 11-7-12, rig. Loring Oil Co.'s Bowman-Hicks 15, nw se 2-7-12, rig. McDaniels et al's Batson 2, 16-8-12, 6⅝ cas 2190 ft, dry, show oil, sd 2565 ft. Lacey Jesup Oil Co.'s Brown Lbr. Co. 1, se ne 28-8-10, 6-inch 2256 ft, at top Z. marl, top chalk 2690 ft, sd 3160 ft. Lacey Pet. Co.'s Cooper 1, 30-8-11, top Z. chalk 2306 ft, 6⅝ cas 2270 ft, hfo making heads, wosr, td 2620 ft. Eylers O&G Co.'s Fraser 1, nw sw 10-8-11, elev 307 ft, top Z. marl 2160 ft, 8⅛ inch cas 2150 ft, tested dry, sd 2650 ft. R. L. Gay, Tr.'s, Bowman-Hicks 9, ne sw 18-7-13, 6⅝ cas 2187 ft, top Blossom 2697 ft, sw abn, td 2717 ft in sand. Sabine Lbr. Co. A-2, ne nw 1-7-12, sp 10-inch 58 ft, dr 150 ft. D. H. Reddick et al's Scretchfield 1, 18-9-12, sd 3310 ft. Pelican Nat. Gas Co.'s La. Long Leaf 7, nw sw 10-7-11, 6⅝ cas 2320 ft, blg to test 2600 ft; Sabine Lbr. Co. 7, 11-7-12, top marl 2325 ft, 6-inch 2320 ft, 600 ft oil hole, wo, td 2399 ft. P&G Oil Co.'s Williams 1, 21-7-12, rig. T. G. Shaw's Sabine 1, 1-7-12, 6⅝ cas 2324 ft, dry 2384 ft, dry 2477 ft, sd 2505 ft. Essco Pet. Co.'s La. Long Leaf 1, 35-8-11, 6-inch 2346 ft, dry at 2420 and 2600 ft, arr test again at 2600 ft where light oil show found. Trans-America Oil Co.'s Carter 1, 36-8-12, top Z. marl 2311 ft, 6-inch cas 2211 ft, 700 ft oil hole, wo, td 2540 ft. Texas Co.'s Stoker 1, nw se 10-7-11, wosr, td 2550 ft. Stills 2, ne nw 3-7-11, sp 10-inch 96 ft, dr 912 ft. Longoria et al's Belton 1, 31-9-12, rig. Franks et al's Dew 1, (formerly Hays 1), 22-8-11, 6-inch 2111 ft, td 2211 ft. Towery Drilling Co.'s Sabine 1, 12-7-12, set 6-inch top marl 2335 ft, pumping 170 bbls oil day, td 2436 ft. D. M. Lide's Ponder 1, 15-7-11, top marl 2393 ft, top chalk 2407 ft, 6-inch 2385 ft, hfo wosr, td 2800 ft; Ponder 2, ne nw 15-7-11, dk. W. M. Coates' Sabine 2, nw sw 1-7-12, lcn; Sabine B-2, sw sw 1-7-12, lcn. Wilson & Sons' Gandy-Garrett 1, 4-5-13, dr 2215 ft. Tom David's Smith 1, 27-8-10, dr shale and lime 2610 ft. Merritt et al's La. Long Leaf 1, 33-8-11, 6-inch 2294 ft, sd 2500 ft. Tarver et al's Baker 1, nw ne 36-8-12, top marl 2209 ft, 8-inch 2212 ft, top chalk 2224 ft, base chalk 2752 ft, top Blossom 3040 ft, dr shale 3814 ft. Jno. Woodley's Sabine 1, ne se 12-8-12, 10-inch 103 ft. H. W. Perritt's Bowman-Hicks 1, 2-7-12, 6-inch 2230 ft, flowing 50 bbls oil day thru 2-inch tub, td 2288 ft; Bowman-Hicks B-1, se ne 2-7-12, sp 10-inch 72 ft; Bowman-Hicks 3, 2-7-12, dk. Triangle Pet. Co.'s Sabine 1, sw sw 36-8-12, 6⅝ 2274 ft. Diffie & Barrett's Lites 1, se nw 34-8-11, 10-inch 105 ft. Frank Melat's Sabine 1, ne sw 6-7-11, 1-inch 106 ft, dr 562 ft; Sabine 2, ne nw 14-7-12, 6-inch 2250 ft, dry at 2500 ft, tested dry show gas no chalk, td 2550 ft. J. M. Thompkins' Stoker 1, 10-7-11, dk. Lyons & Neely's Sabine 1, 12-7-12, sp 10-inch 120 ft. Magnolia Pet. Co.'s Lucius 1, 2-3n-12, sp 13⅜ cas 204 ft, dr shale 400 ft.

TENSAS PARISH—Seip et al's Fowler 1, 10-10-10e, sd 905 ft. A. R. Wills' Curry 1, 39-11-12, sd 2780 ft.

UNION PARISH—Ouachita Nat. O&G Co., Inc.'s., Smith 1, sw ne 36-20-2e, sp dr 380 ft.

WEBSTER PARISH—Gerhig Co.'s Miller 1, ne sw 16-18-10, 12½ cas 200 ft, base chalk 2070 ft, sd in red beds 3340 ft. D. H. Coyle's Frazier 1, ne se 27-23-11, dk. Cassidy & Davis' Nickerson 1, ne sw 29-23-10, dk. Red Hawk Oil Co.'s Matthews 1, se nw 11-23-9, rig.

ARKANSAS

Company, Well and Location	Completions	Initial Production Bbls.	Depth
FRANKLIN COUNTY—			
Red Bank Oil Co., Hamm 1, 33-10-26w		?8½	3793
LOGAN COUNTY—			
Ark. La. P. L. Co., Jno Jansen 1, 35-8-24		*	2400

CHICOT COUNTY—H. R. Smith's Lytle 1, 31-18-3, cemtd back to 2865 ft arr whipstock td 2865 ft cld td 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s Underwood 2, nw se 4-20-8e, 6-in 237 ft td 237 ft.

CLEBURNE COUNTY—Donnell et al's Fee 1, 33-11-9, swedging out cas at 2300 ft td 3740 ft.

DALLAS COUNTY—John James, Tr.'s Fordyce Lbr. Co. 1, nw ne nw 11-9s-15w, sp dr 50 ft. E. C. Brewer, Tr.'s Hillman 1 se ne 20-10-13, 10-in 88 ft dr gummy shale and strks gumbo 1608 ft.

FRANKLIN COUNTY—Red Bank Oil Co.'s Hamm 1, 33-10-26w, plugged back to 3050 ft after gauging 6½ mil ft gas at 3750 ft completed making 8½ mil ft dry gas 875 lbs r.p. td 3793 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3n-19w, casing pulled hole full sw td 3756 ft.

HOT SPRINGS COUNTY—John Watkins, Tr.'s Cunningham 1, 11-5-16, sd 100 ft. Cleary Bros. et al's Hinson 1, 19-4s-16w, 11 ft sand sd 1604 ft.

JOHNSON COUNTY—Ark. La. P. L. Co.'s Hudson 1, se ne 14-10-24, 10-in cas 2607 ft dr hd shale 2805 ft. Blackwell O&G Co.'s Wyver 1, 21-8-23, ta 5600 ft.

LA FAYETTE COUNTY — Crawford Drilling Co.'s Vaughan 1, 25-19-25, rig. McIver et al's Hattle 1, nw ne 1-20-26, sd 20 ft.

LITTLE RIVER COUNTY—Buck Oil Co.'s Taafe 1, 25-12-32, co td 2502 ft.

LOGAN COUNTY—Ark. La. P. L. Co.'s Jno. Jansen 1, ne ne 35-8-24, set 13⅜ cas 343 ft dry abn in sandy shale td 2400 ft. M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd while ur 5 3/16 cas at 3570 ft td 3610 ft.

MILLER COUNTY— E. & F. Oil Co.'s E. L. Beck 1, 36-15-26, set 6⅝ cas 2792 ft recemtd 4½ cas at 2957 ft td 2961 ft. Lentz et al's Johnson 2, 24-15-26, testing tool recovered dr estimated depth 4000 ft. Johnson 3, ne nw 24-16-26, sd 2850 ft. Bullock Oil Co.'s Hervey 1, 2-15-26, coring 2616 ft. East Texas O&G Co.'s Hervey 1, 2-15-26, sd wo 8-in cas 900 ft. Gusher Bend Oil Co.'s Adams 1, nw nw 24-14-26, 10-in 115 ft sd 160 ft. O'Mara et al's Person 1, 31-15-25, lcn. Fitzwater et al's Beck 1, sw se 33-15-26, 10-in 85 ft, sd. Salzer & McRae's Ross 1, ne nw 9-16-26, 10-in cas 98 ft sd 475 ft.

OUACHITA PARISH — Belmont et al's Dean 1, 16-15-17, top red beds 2765 ft sd with junk in hole 2907 ft. A. B. Turner, Tr.'s Brown 1, 23-15-18, 6⅝ cas 2164 ft top red beds 2700 ft coring red beds 2800 ft. Copenheaver et al's Elliott 1, se se 11-15-17, ds stuck 2114 ft. Wesson & Benner's Wesson 1, sw nw 22-15-19, 6⅜ cas 2083 ft wo power to pump 300 ft fluid in hole td 2151 ft. J. D. Reynolds' Pace 1, ne se 21-15-19 (Stephens townsite), 10-in 44 ft cored Nacatosh 1505.11 ft did not test Nacatosh dr hd sandy lime 1670 ft.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, show heavy oil 567 ft dr 1990 ft. E. R. Henderson's Lee 1, sw se 31-8s-24w, dk.

POPE COUNTY—Ark. La. P. L. Co.'s McFadden & Brooks 2, ne nw 15-9-21, 13⅜ cas 1900 ft tested est 1 mil ft gas 3285 ft cemtd 8⅝ cas bottom hole 3415 ft.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Ark. Valley Gas Co.'s Turner 1, se se 27-5n-30w, lcn.

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, sd after testing sw 3515 ft.

UNION COUNTY—Hickman et al's Hogg 1, 35-16-17, top Graves sand 2351 ft top red beds 2779 ft coring 2892 ft. Oilfields Corp.'s J. A. Simmons 1, nw nw 9-18-13, ta 3602 ft. Rice et al's Whatley 1, 7-17-15, sd 1520 ft. H. L. Hunt, Inc.'s Swilley 5, ne ne 28-16-16, 6⅝ cas 2678 ft 2000 ft oil trace sw in hole wosr td 2689 ft. Swilley 6, se se 21-16-16, 1000 ft fluid hole 40 per cent sw wosr td 2711 ft. Marine Oil Co.'s W. B. Thompson B-3, se ne

10-18-13, 10-in 292 ft dr 3005 ft. Southern Prod. Co.'s Wingfield 1, se nw 16-19-15, 10-in cas 210 ft. Wilson & Chapman's Hadley 1, ne sw 3-18-13, rig. Sunby et al's Perdue 2, nw nw 33-16-14, old well dr deeper old td 3214 ft cored white sand 3214-17 ft sr to 3220 ft arr ds test 3210-17 ft.

WASHINGTON COUNTY — Taylor et al's Runny 1, 1-13-29, sd 1702 ft. Lincoln Lease Holding Synd.'s Townsite 1, 30-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, ta 850 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

VAN BUREN COUNTY — J. S. Martin's Scanlan 1, 5-9-13, sd 50 ft.

YELL COUNTY — T. Luckett's Balcon 1, 36-7-21, sd while fsh tools td 5710 ft.

MISSISSIPPI

Completions

HINDS COUNTY (Jackson Dist.)—
Pirtle & Flint, Negro Fair Assn. 1, 28-6-1s . . . . . ¶10 2507

ALCORN COUNTY — Alcorn Pet. Co.'s Matthews 1, se se 14-2s-7e, ta with fsh job, td 2735 ft.

CLAY COUNTY—Ohio Oil Co.'s Cantrell 1, ne ne 16-15-5e, elev 270 ft, 13⅜ cas 1389 ft, dr sand and shale 2798 ft (corrected depth).

COVINGTON COUNTY (Collins Dist.)—Miss. Gulf O&G Co.'s Pope 1, nw ne 35-8n-16w, 12½ cas 126 ft, coring lime and shells 996 ft. S. P. Borden et al's McIntosh 1, sw ne 5-8n-16w, cemtd 12½ cas in marl at 805 ft.

CHICKASAW COUNTY — Hightower & Golsan's Fleming 1, 20-13s-3e, sd 1562 ft.

GRENADA COUNTY—Carter Oil Co.'s Dubard 1, nw nw 18-22-4s, sp.

HINDS COUNTY (Jackson Dist.)—Mrs. Ella Rawls Reeder's State Land 1, sw nw 25-6-1e, sd 2905 ft. Jackson O&G Co.'s Central Cotton 1, sw nw 3-5-1e, dk. Love Pet. Co.'s Maley 1, se nw 15-5-1e, elev 257.3 ft, top Midway shale 2387 ft, top chalk 2437 ft, cemtd 6⅝ cas 2487 ft, arr cement effort kill off sw, after it flowed for several weeks making much sw, 50 bbls heavy oil day and est 3 mil ft gas day, td 2495 ft. Pirtle & Flint's Negro Fair Assn. 1, nw se 28-6-1e, elev 307 ft, top Midway shale 2420 ft, top chalk 2498 ft, 6-inch 2379 ft, 4½ cas top chalk, making est 10 mil ft gas trace sw, td 2507 ft. Southern Pet. Co.'s Wilson 1, se ne 23-6-1e, sd 20 ft. Miss. Pet. Co.'s Solvent 1, sw sw 14-5-1w, top Midway shale 2970 ft, fsh pipe drill collar and fishtail bit, td 3042 ft. Howard Oil Co.'s Jackson College 1, nw nw 9.5-1e, 12½ cas 15 ft, sd. Atkisson et al's Wiggins 1, nw ne 33-6-1e, elev 307.8 ft, top Midway shale 2392 ft, top chalk 2490 ft, well killed after coming in as 6 to 15 mil ft gasser because of leaky casing, 6-inch cemtd 2490 ft, wo string 4½-inch cas to run inside 6-inch string; Downey 1, ne ne 27-6-1e, rig. Kennedy et al's Fee 1, ne ne 34-6-1e, lcn. Gulf Ref. Co.'s McLaurin 1, sw ne 30-6-2e, top Midway shale 2392 ft, wo to drill plug in 9-inch cas cemtd 2466 ft. Cane River O&G Co.'s Kabbes 1, ne sw 15.5-1e, elev 262 ft, top Midway shale 2435 ft, top chalk 2541 ft, coring red beds 3240 ft. Love et al's Ridgeway & McGehee 2, ne nw 2-5-1e, elev 271 ft, rig. Iowa Gas Co.'s Payne 1, nw nw 15-5-1e, elev 271 ft, top Midway chalk 2476 ft, wo cas, td 2477 ft. Miss. Pet. Co.'s Baptist Orphanage 2, ne se 28-6-1e, rig. Feazel O&G Co.'s Garrett 1, se ne 2-5-1e, sp 10-inch 105 ft, dr 1650 ft. Love Pet. Co.'s Taylor 1, 34-6-1e, sp 15½ cas 50 ft, 10-inch 780 ft.

JASPER COUNTY (Bay Springs Dist.)—Bay Springs Pet., Inc., J. H. Keyes 1, nw ne 21-2n-10e, set 15½ cas 104 ft.

KEMPER COUNTY (De Kalb Dist.)—W. W. Jones' Rosenbaum 1, lcn not given, dk.

LA FAYETTE COUNTY—F. E. West et al's May 1, 22-10-1w, rig.

MADISON COUNTY (Jackson Dist.)—Central O&G Co.'s Cameron 1, se se 11-9n-1e, 10-inch 201 ft (revised depth), dr gumbo 1050 ft, (to be 4000 ft test).

MONROE COUNTY (Amory Dist.)—Amory Dev. Co.'s Bourland 1, sw ne 2-13-19, cas pulled sd wo in brown sand 3007 ft. P. J. McAlpine's Cowart 1, ne sw 2-17-19, 10-inch cas 694 ft, sd in red limerock 1125 ft. Associated Royalties' School Board 1, sw se 16-15-17, sd 60 ft. Amory Pet. Corp.'s Harris 1, nw nw 18-13s-17w, mov in rig; Carter 3, se se 7-13s-17w, 10-inch 564 ft, 6⅝ cas 2382 ft, sand 2382-96 ft, shale 2396-2400 ft, gauged 182,000 ft gas, 380 lbs. r.p., shot with 10 qts gelatin, yield increased to 201,000 cu ft gas, td 2400 ft, probably be completed at present depth.

NESHOBA COUNTY (Philadelphia Dist.)—Collins et al's Carter 1, se se 29-11n-12e, dk.

RANKIN COUNTY (Jackson Dist.)—Sabine O&G Co.'s Rankin Dev. Co. 1, sw ne 6-5-2e, elev 273 ft, top Midway shale 2437 ft, top chalk 2548 ft, sd 2548 ft. Gulf Ref. Co.'s Hamilton Est. 1, sw sw 4-5-2e, elev 284 ft, top Midway shale 2537 ft, top chalk 2620 ft, 9-inch cas 2610 ft, top red beds 3059 ft, dr hard shale 4065 ft. Love et al's Muse 1, se se 32-7-4e, cemtd 12½ cas 600 ft, dr gumbo 1080 ft. Love Pet. Co.'s Moore 1, se nw 28-6-2e, sd 900 ft. Millstein O&G Co.'s Gammill-Hartfield 1, sw se 6-5-2e, top Midway shale 2410 ft, top chalk 2496 ft, 7-inch OD cas set 2476 ft, bailed some heavy gravity oil when test bailed down 1200 ft, arr set liner, td 2500 ft. Pearl River O&G Co.'s Pate 3, se sw 12-5-1e, elev 269.5 ft, 10-inch 268 ft, top Midway shale 2335 ft, cemtd 6⅝ OD cas 2371 ft. Pioneer O&G Co.'s Ragland 1, sw sw 12-5-1e, dk. Ganzel et al's Stallings 1, ne ne 25-5-1e, sp. Miss. Gas & Fuel Co.'s Hanna 1, sw ne 14-5-1e, dk.

WARREN COUNTY (Vicksburg Dist.)—Dixie Pet. Co.'s Clark 1, sw sw 37-17n-5e, sp. Vicksburg O&G Co.'s Dornbusch 1, 8-18n-5e, sd 1600 ft.

WEBSTER COUNTY—Cumberland Oil Co.'s Henley 1, 15-21-11, ta 1865 ft.

WINSTON COUNTY (Louisville Dist.)—Miss. Drilling Co.'s Scarbrough 1, nw nw 15-13n-14e, tested dry ds in gummy sandy shale 1814-20 ft, arr deepen.

YALABOUSHA COUNTY (Water Valley Dist.)—J. D. Collett et al's Blackmer 2, sw nw 14-11s-4w, 12½ cas 103 ft, dr gummy shale 1000 ft.

ALABAMA

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27.7-1w, sd in limey shale 881 ft; Hobson Bros. 1, 9-8-2w, sd 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, sd 700 ft.

TENNESSEE

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, dr hard lime 2075 ft (no recent report).

SOUTHERN CALIFORNIA

ALHAMBRA — George Wolfe's Construccio 1, rig, sd.

ATHENS—McKeon Oil Co.'s Sunny Side Heights 1, 1-3-14, dr hard brown shale 3950 ft.

BELL—Cudahay Community Oil Ass'n.'s 1, dr gravel 1200 ft.

CORONA—Western Gulf's Abacherli 1, 12-3-8, dr shale 1329 ft.

CULVER CITY—Olympic Oil and Realty Co.'s 1, 14-2-15, co 4840 ft. Taylor Oil Co.'s 1, dr shale 4278 ft.

EL MONTE—Rancho Oil Corp.'s Harmon 1, 30-1-11, dr shale 2050 ft.

FULLERTON—Brea Canyon Oil Co.'s Fee 47, dr gray sand 5900 ft. Standard's Bastanchury 1, 21-3-10, dr shale 7490 ft.

HAWTHORNE — The Alondra Co. 1, 23-3-14, rig.

HERMOSA — California Ventura Oil Co.'s Sadler 2, 31-3-14, pumping oil and water, td 3330 ft Smith Pet. Co. 1, lcn.

MANHATTAN BEACH—Staple Oil Co. 1, 24-3-15, rig.

NEWHALL — Southern California Drilling Co.'s Needham 5, 13-3-6, lcn.

NEWPORT — T. E. Gesells 1, 29-6-10, dr shale 616 ft. Standard's Irvine 1, 26-6-10, dr shale 3229 ft.

OLIVE—Texas' Olive Community 1, 7-4-9, dr sand and clay 1000 ft.

PLAYA DEL REY—West Port Pet. Corp. 1, 27-2-15, dr shale 5600 ft.

PUENTE HILLS — Bardeen Pet. Corp.'s Barnadette 1, 2-2-10, dr shale 1888 ft. C. F. Shannon 1, 3-2-10, co 4620 ft. Vega Pet. Corp.'s Rowland 1, dr oil sand and shale 2521 ft. Rucker and Croul's Grazide 2, 22-2-10, dr surface sand 150 ft.

REPETTO HILLS—Texas' 1, 4-2-12, lcn.

SAN FERNANDO — Mack Oil Co.'s Deer Lake 1, 6-2-16, rig. San Val Oil Co. 1 ,14-1-16, dr gray sand 1616 ft.

SANTA MONICA—Hines Pet. Corp. 1, 8-2-15, rigging up rotary.

SAN JUAN CAPISTRANO—Okay 2's Foster 2, 13-8-8, sd 5226 ft.

WILMINGTON — Wilmington Consolidated Oil Co. 1, rigging up rotary.

NORTHERN CALIFORNIA

Completions

EDISON—
Petroleum Securities Co.'s Johnson-Moss 1, 14-29-29 . . . . . * 4242

MONTEREY—
Standard's Piedmont 1, 23-22-7 . . . . . * 6093

ANTELOPE VALLEY—Meridian Oil Co. 1, 11-9-15, dr hard sand 3760 ft.

BELRIDGE—Associated 21-6, 21-27-20, lcn. Belridge Oil Co. 27-8, 27-27-20, dr shale 2100 ft; 35-8, 35-27-20, rig; 35-33, 35-27-20, sp; 35-48, 35-27-20, cmt 16-in cas at 1055 ft. General Pet.'s Berry 1, 30-28-21, re-dr 2800 ft. Ohio's Bloemer 1, 36-27-20, dr shale 4750 ft. Reward Oil Co.'s Associated 4, 34-27-20, sr 2765 ft. Richfield's Belridge 1, 22-27-20, dr shale 6366 ft. Standard's McPhail 1, 36-27-20, dr shale 4365 ft; McPhail 2, 36-27-20, dr hard shale 3315 ft. Texas' Martin 1, 22-27-20, dr shale 3500 ft. Union's Belridge 17, 36-27-20, sr 3430 ft; Gibson 7, lcn; Bacon 1, 27-28-20, lcn. K. C. Wallace 1, 32-29-21, dr shale 4050 ft.

BUENA VISTA HILLS — Federal Drilling Co. 1, 20-31-24, sr 5240 ft.

BUTTONWILLOW — Nordon Oil Corp.'s Salisbury 1A, 7-29-24, fsh for cas, td 6583 ft. Superior's KCL-1, 32-29-25, dr shale 4025 ft.

DELANO—C. C. M. O's Villard A1, 31-25-28, lcn.

DEVIL'S DEN—Standard's Alferitz 1, 14-25-18, sr 1535 ft.

EL TEJON—J. J. Ritchie 1, 33-11-19, dr coarse sand 5322 ft.

McKITTRICK — California Oil Producers' Wisecarver 1, 30-30-22, rigging up rotary.

SEMITROPIC—Shell's Williams 1, 17-27-23, dr gray sand 8985 ft.

WASCO—Cities Service Pet. Co. 1, 16-28-24, dr shale 1100 ft.

WEED PATCH—Mohawk Oil Co.'s Wharton 1, 32-30-29, dr oil sand 5775 ft. Shell's Morris 1, 32-30-29, rigging up; Porter 1, 29-30-29, dr shale 4960 ft; Porter-Day 1, 29-30-29, dr hard shale 6760 ft.

SANTA BARBARA COUNTY

COAL OIL POINT—Bolsa Chica Oil Corp.'s Augur 191-1, coring oil sand 4191 ft, will stop and make production test.

CUYAMA—Cuyama Valley Oil Corp. 1, 12-10-27, rigging up rotary. Hart Pet. Co. 1, 27-10-26, new lcn.

GATO RIDGE—Barnsdall's Tegnazzini 1, 9-8-32, fsh for drill pipe 6030 ft.

GOLETA—General Pet.'s More 3, dr shale 3965 ft.

LOS ALAMOS—N. S. Wilson's Midwest 1, 2-7-33, 12½-in cas cmt 1800 ft.

ORELLA—General Pet.'s Erburu 8, plugging back from 4070 ft to 2700 ft for test. Prairie Oil and Gas' El Capitan 1, dr shale 1560 ft.

POINT CONCEPCION—Standard's Gerber 1, fsh for drill pipe, td 6820 ft.

SANTA MARIA—Western Gulf's Bradley 1, 5-9-33, dr shale 5066 ft.

VENTURA COUNTY

HOOPER CANYON—George H. Hadley 1, 13-4-9, co 1010 ft.

OJAI — Drednaught Oil Co.'s Canet 1, dr shale 1000 ft. Knudsen and Schmidt's 1, 12-4-23, dr hard sand 638 ft.

RINCON—Chanslor-Canfield Midway's Hobson A-2, 23-3-24, dr shale 7675 ft. Continental's Grubb 1, 23-3-24, bldg. rig.

SANTA MONICA MOUNTAINS—Olympic Corp.'s Calabasas 1, 18-1-17, co to bottom, td 5669 ft.

SANTA PAULA — San Pedro-Pt. Fermin Synd.'s Kellerman 2, 13-4-21, dr shale 2320 ft. George C. Thompson 1, 15-4-21, swabbing water, td 2580 ft.

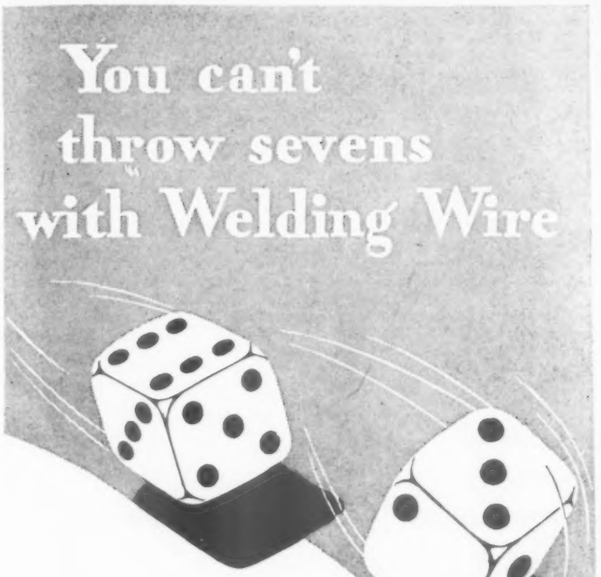
SESPE—Merchants Pet. Co.'s Cochran 1, 1-4-20, dr shale and hard sand 200 ft. Superior's Kirtlan 1, 15-4-21, dr shale 4328 ft.

VENTURA—Prairie Oil and Gas' Sexton 1, 30-3-22, dr shale 8110 ft.

MISCELLANEOUS

FRESNO COUNTY—Associated's Mitchell-Jacalitos 1, sd 3595 ft.

KINGS COUNTY—L. W. Seymour's No. 1, 10-23-16, sr 1010 ft. T. H. Purman's Avenal 1,



You can't throw sevens with Welding Wire

Don't Gamble!

You won't gamble on the kind of men you employ in a business where defects may be hidden and their presence disastrous.

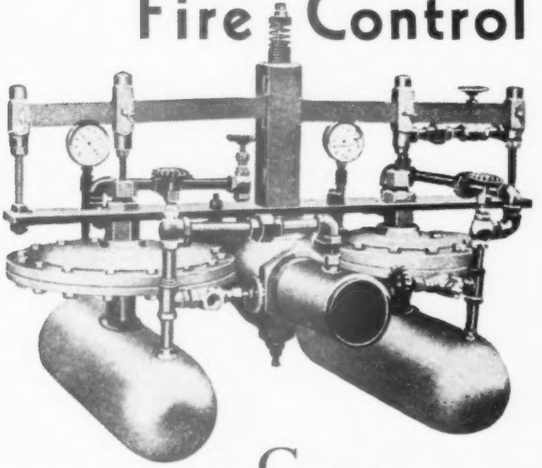
You should be as careful in the selection of materials as you are of men. You can't afford to gamble on welding wire quality. You should always use Page-Armco Welding Wire and Electrodes.

Your men will work faster, surer, at greater profit to you if you supply them with wire that comes to you flame-tested and shop-tested—processed for the particular kind of work you have in hand. It is good practice to use Page always.

PAGE STEEL *and* WIRE COMPANY
General Sales Office: New York Central Building
230 Park Avenue, New York, N. Y.
District Sales Offices:
Chicago, New York, Pittsburgh, San Francisco
An Associate Company of the American Chain Company, *Inc.*
Canadian Distributor and Manufacturer:
Frost Steel and Wire Co., *Limited*, Hamilton, Ontario

PAGE-ARMCO
FLAME-TESTED **PROCESSED** SHOP-TESTED
WELDING WIRE *and* ELECTRODES

. . . . . Badgett's New Automatic Fire Control



CONFORMING with our policy of supplying reliable oil field accessories, which are both inexpensive and economical of operation, we offer our new automatic Gas Fire Control.

This Control is easy to install and inexpensive to operate and earns its original cost many times over in the saving of fuel and elimination of breakdown troubles.

Like all other Badgett products, this new Gas Fire Control is guaranteed. It works accurately on variation of gas pressure from 5 to 300 pounds, and is easily changed for any burner pressure by merely opening a needle valve, allowing the pressure to reach the desired point. The control is operated on gas until the desired steam pressure is reached when it automatically switches over to the steam side. The Badgett Gas Fire Control operates so perfectly that the steam pressure will not vary more than 2 to 4 pounds on drilling rigs. The Diaphragm is built to withstand 600 pounds working pressure.

If you want to save boiler troubles, time, money, why not wire or telephone your supply house today to send you one or more Badgett Automatic Gas Fire Controls?

We can supply the New Automatic Gas Fire Control in either 2" or 3", single or double control. We recommend the single control be used only where the gas pressure does not vary in the line.

Southern Drilling Co., Oklahoma City

John Mabee, Tulsa
Loffland Bros., Tulsa
J. Henry, Duncan, Okla.
Summit Drilling Co., Tulsa
G. J. Beard, Duncan, Okla.
Hubbard & Wofford, Tulsa
Herman Wagener, Oklahoma City
Byers Drilling Co., Oklahoma City
A & B Drilling Co., Oklahoma City
Capitol Drilling Co., Oklahoma City
Prince & Prince, Electra, Texas
Clark & Cowden, Duncan, Okla.
Independent Oil Co., Oklahoma City
G. E. Gilberth, Oklahoma City
Golden & Cochran, Wink, Texas
Haynes Drilling Co., Wink, Texas
Murphy & Graham, Seminole, Okla.
Steinberg & Yerkee, Seminole, Okla.
Fain-McGaha, Wichita Falls, Texas
Alleson & Clevinger, Seminole, Okla.
Winkler & McQueen, Duncan, Okla.
Reynold Drilling Co., Seminole, Okla.
Manahan Drilling Co., Seminole, Okla.
Herndon Drilling Co., Seminole, Okla.
Hartman & Hamilton, Seminole, Okla.

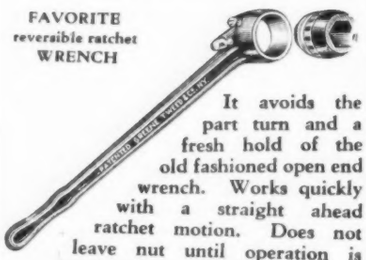
You are not obligating yourself when you write for details.

Sold through leading supply houses in the Mid-West and through the National Supply Co. in the State of California.

BADGETT STEAM LUBRICATOR COMPANY
CHICKASHA - - - OKLAHOMA

To cut out all the lost motion of nut turning use the

FAVORITE
reversible ratchet
WRENCH



It avoids the part turn and a fresh hold of the old fashioned open end wrench. Works quickly with a straight ahead ratchet motion. Does not leave nut until operation is completed—no slipping.

Write for particulars

BUILT STRONG
FOR ROUGH USAGE

Greene, Tweed & Co.
Sole Manufacturers
109 Duane St.,
New York

36-23-17, dr shale 1568 ft. Kettleman Lakeview Oil and Gas Co.'s No. 1, 11-23-19, well blew out from dry gas flow, td 1285 ft, rig down, will kill. Murphy Oil Co.'s Brennan 1, 20-23-20, dr hard sand 2688 ft.

MENDOCINO COUNTY—Twin State Oil Co.'s Soldani 1, 14-12-17, dr shale 5550 ft.

MONTEREY COUNTY—Pacific Inland Oil Co.'s No. 1A, 19-23-15, dr shale 950 ft.

SAN LUIS OBISPO COUNTY—C. J. Schilling's Potter 1, 1-29-12, dr shale 928 ft. C. Shockley's Carpenter 1, 13-32-13, dr hard sand 2100 ft. Continental's Hellman 1, 26-25-11, dr shale 2940 ft. Latin-American Oil Co.'s No. 1, 31-27-15, swabbing water, td 4505 ft. Pismo Dome Oil Co.'s Pricco 2A, 5-31-13, fsh for 8¼ inch cas, td 2965 ft.

TULARE COUNTY — Big Four Drilling Co.'s No. 1, 29-23-27, repairing cas, td 4330 ft. Ducor Drilling Co.'s Zimmerman 1, 14-24-27, sdtr iron 2180 ft. Grand View Oil Co.'s No. 1, 8-23-28, dr shale 1015 ft. Inland Valley Oil Co.'s Smith-Rea 1, 24-17-24, sdtr iron 2060 ft.

YOLO COUNTY—George F. Getty's Guinda 1, 23-12-3, sd 2007 ft.

OKLAHOMA

ALFALFA COUNTY—T, 27n, R 11w, Sec. 12, Smith Bros.'s Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T, 27n, R 2e, Sec. 9, Mummer et al's Sornick 1, nw c se, dr 2040 ft. T, 26n, R 1w, Sec. 32, Boucher et al's Jefferson 1, ne c sw, lost hole 1175 ft to skid.

HARPER COUNTY—T, 25n, R 20w, Sec. 12, Empire's Bruce 1, sw c ne ne sw, show oil 7161-7173 dr 7902 ft.

GRANT COUNTY—T, 25n, R 4w, Sec. 22, Cowden's Collmer 2, ne c se ne sw, lost tools 5640 ft sd.

ALFALFA COUNTY—T, 24n, R 11w, Sec. 14, J. V. Bailey et al's Acre 1, c sw ne, show water 4649 dr 4889 ft.

GARFIELD COUNTY—T, 24n, R 6w, Sec. 9, Pulse & Beamer's White 1, se c nw, c.o. 5825 ft.

NOBLE COUNTY—T, 21n, R 13e Sec. 12, Barnsdall et al's Mich. 1, nw c sw, hfw 3050-55 ft dr 4655.

BLAINE COUNTY—T, 19n, R 10w, Sec. 13, Washoma Pet. Co.'s Phillips 1, c nw sw, hfw 4150-60 hfw 4535-37 ft.

LOGAN COUNTY—T, 18n, R 3w, Sec. 33, Healy & Consolidated Drlg. Co.'s Quier 1, se c sw, sd 3970 ft.

KAY COUNTY—T, 28n, R 3e, Sec. 24, Summitt Drlg. Co. et al's Hays 1, nw c ne nw, dr 1550 ft.

OSAGE COUNTY—T 28n, R 7e, Sec. 4, L. G. Stanley et al 1, se c sw, dr 1185 ft.

PAWNEE COUNTY—T, 23n, R 5e, Sec. 15, Cochran et al's McFadden 1, ne c sw, rig. T. 22n, R 3e, Sec. 26, Wentz Oil Corp.'s Lillie 1, se c sw ne, dr 4092 ft. T 22n, r 5e, Sec. 2, Sherry et al's Millsap 1, se c sw, sd 1750 ft. T, 20n, R 5e, Sec. 6, W. A. Rockstool's Berry 1, nw ne sw, dr 1800 ft.

LINCOLN COUNTY—T, 13n, R 6e, Sec. 8, Atlantic's Beebe 1, sw c ne sw, lcn.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 3, Shepperd et al's Shepperd 1, se nw sw, fshg. 3690 ft.

MUSKOGEE COUNTY—T, 11n, R 19e, Sec. 21, E. Mills et al's Martin 1, nw c se, sd 1601 ft.

PITTSBURG COUNTY—T, 9n, R 16e, Sec. 32, Pattison et al's McDuff 1, sw c nw se, sd 5682 ft. T, 8n, R 14e, Sec. 14, C. O. Cannady's Smith 1, sw c ne nw nw, rig and tools.

OKLAHOMA COUNTY—T, 14n, R 3w, Sec. 32, Mid-Kansas's Messer 1, sw c, sand 6690-6771 ft td flowed 425 bbls. after shot of 190 qts, now shut in. T, 12n, R 4w, Sec. 17, C. F. Cuniff Trustee's Orphanage 1, sw c ne sw se, sd 6700 ft td.

McCLAIN COUNTY—T, 7n, R 2w, Sec. 22, Prairie & Slick's Perkinson 1, sw c nw, dr 6510 ft.

CLEVELAND COUNTY—T, 6n, R 1e, Sec. 20, Harris & McNeal's Corbett 1, c sw ne, td 6760 ft pb 6415 ft, 1500 ft water some oil will abandon.

OKFUSKEE COUNTY—T, 11n, R 8e, Sec. 11, Carter et al's Keys 1, sw ne sw, sand 4214-25 ft swab 25 bbls. from Hunton Lime 3950-4060 ft.

POTTAWATOMIE COUNTY — T, 10n, R 4e, Sec. 10, Shell's Baker 1, nw c se, lcn.

SEMINOLE COUNTY—T, 7n, R 3e, Sec. 19, Droppleman et al's Fundis 1, se c ne, dr 5332 ft. T, 6n, R 5e, Sec. 5, Robinson-Hicks' Crouch 1, nw c sw, sand 4266-72 ft swab 130 bbls, oil, 290 bbls water, td 4404 ft abandoned.

ROGER MILLS COUNTY—T, 13n, R 21w, Sec. 10, Richfield O&R Co.'s Hiatt 1, se c, rig. T, 12n, R 24w, Sec. 23, Ute Oil Co. et al's Williams 1, c sw, dr 2910 ft.

CANADIAN COUNTY—T, 10n, R 6w, Sec. 1, J. V. Bailey's Robinson 1, c ne nw, sd 150 ft.

CADDO COUNTY—T, 9n, R 13w, Sec. 18, J. J. Wright & Shell's Boys 1, ne c, lcn.

WASHITA COUNTY—T, 8n, R 19w, Sec. 29, Snodgrass et al's Blocker 1, nw c, dr 492 ft. T, 8n, R 18w, Sec. 21, Burns & Prince's Dock 1, sw c. dr 15 ft.

GREER COUNTY—T, 7n, R 22w, Sec. 1, Roy Good et al's Cliffel 1, nw c, sd 1760 ft. T, 7n, R 21w, Sec. 23, H. A. French et al's Murphy 1, sw nw se, dr 1025 ft.

HARMON COUNTY—T, 4n, R 24w, Sec. 17, Harmon-Tex. Oil Co.'s Headley 1, ne c, show O&G 2374-92 sd 2593 ft.

COMANCHE COUNTY—T, 3n, R 9w, Sec. 3, Okla. Nat. Gas Co.'s Doeble 1, ne c sw sw sw, sd 1450 ft.

JEFFERSON COUNTY—T, 7s, R 6w, Sec. 35, Brown & Gouin's Cox 1, sw nw ne, dr 1930 ft.

HUGHES COUNTY—T, 5n, R 10e, Sec. 30, Erwin et al's Jones 1, se c ne, td 4775 ft, pb and tested d&a. T, 5n, R 11e, Sec. 15, J. J. Wright's Roberts 1, se c sw, ¶2 915-918 ft, sd 1645 ft.

GARVIN COUNTY—T, 2n, R 2w, Sec. 24, Malernee Oil Co.'s Phillips 1, ne c sw, lcn.

COAL COUNTY — T, 2n, R 8e, Sec. 10, Whitney et al's Miller 1, se c ne ne, sd 750 ft.

ATOKA COUNTY—T, 3s, R 10e, Sec. 18, Brookshire et al's Guinn 1, nw c, show gas 360-72 ft, sd 500 ft.

CARTER COUNTY—T, 4s, R 2e, Sec. 32, Tex-Okla. Drlg. Co.'s Anderson 1, se c ne se, dr 2640 ft.

BRYAN COUNTY—T, 6s, R 7e, Sec. 14, W. A. Johnson's Ussery 1, se c, sd 325 ft. T, 6s, R 9e, Sec. 35, O. P. Bush's Commerce Trust Co. 1, ne c, sd 600 ft. T, 7s, R 10e, Sec. 8, Bryan Oil Co.'s Childs 1, ne c se sw, dr 620 ft.

EASILY OPERATED BY ONE MAN. . . .

Simplest.. Fastest .. Safest
One of the 148 types of Drilling and Fishing Tools made by
ACME FISHING TOOL CO.
at Parkersburg W·Va·
Distributors and Dealers in all active fields

ACME B·& R· WIRE LINE CLAMP

AMERICAN
AURORA, ILL.

The American Well Works manufactures a complete line of oil well pumping units. They are made in a wide variety of sizes permitting a length of stroke of from twelve to fifty inches. All gears are enclosed and run in a bath of oil. Used throughout the oil fields of the world. Catalogs and engineering data upon request.

C. S. CARTER, *Sales Representative*
711 Thompson Bldg., Tulsa, Oklahoma
WM. PIERCE, *Sales Representative*
701 Elm St., Dallas, Texas

THE AMERICAN WELL WORKS
General Offices AURORA, ILLINOIS and Factory

B-M-W PRODUCTS for pumping wells

The KEY to LOWER LIFTING COSTS

CORRECTLY DESIGNED . . ECONOMICALLY PRODUCED

REASONABLY PRICED

It's impossible to lose cups or rings if you use a SECURITY WORKING VALVE.

The popularity of the B - M - W Security Working Valve is based on its performance and because it provides the only dependable method of assembling cups on a Valve — Bottom locked in position at proper tension — A. P. I. specifications, of course, and on sale at leading supply stores.

BRADFORD MOTOR WORKS INC.

OIL WELL SUPPLIES

BRADFORD, PA. TULSA, OKLA.

EXPORT OFFICE—30 CHURCH ST.—NEW YORK CITY

An exhaustive treatment of piping principles and practice

Piping Handbook

By J. H. WALKER

Superintendent of Central Heating, The Detroit Edison Company,
and
SABIN CROCKER
The Detroit Edison Company

764 pages, 5 x 8, illustrated, $5.00

The purpose of this book is to provide authoritative, and accessible data for the engineer interested in piping work. Every needed fact is given, covering scientific fundamentals, materials, and most effective methods.

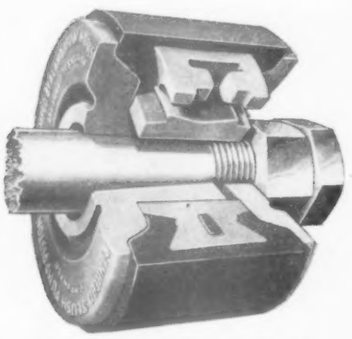
This book is intended to make available to the engineer, contractor and designer a complete handbook of the data necessary to the most effective use of piping in its many and increasingly important industrial applications.

GULF PUBLISHING COMPANY

P. O. Box 1307

HOUSTON TEXAS

Ramhead
SLUSH PUMP PISTONS



Ramheads Make a Good Pump Better

Their improved design with a minimum of constant friction on liner gives smooth regular pump service. There is less friction, less slippage and no metal contact with liners . . . consequently, longer life and increased efficiency. Ramhead Pistons are simple, foolproof and easy to install. Order a set and test them for yourself.

Alamo Iron Works

SAN ANTONIO, TEXAS

Your Business is More *Urgent* Than Ours

THE intimate details of an hotel routine are apt to be vitally important to the man who is going some place, doing something. A brisk shower is an excuse to take your morning exercises with an honest-to-goodness man's-sized-towel . . if you have driven, your car is at the door—clean and slick and as ready to go as you are . . . Here at the Hotel Pennsylvania . . . 10 minutes from the dust and din of down-town . . . Come soon . . . and you will come again.

DANIEL CRAWFORD, Jr., *Manager*

Room with Bath $3.00

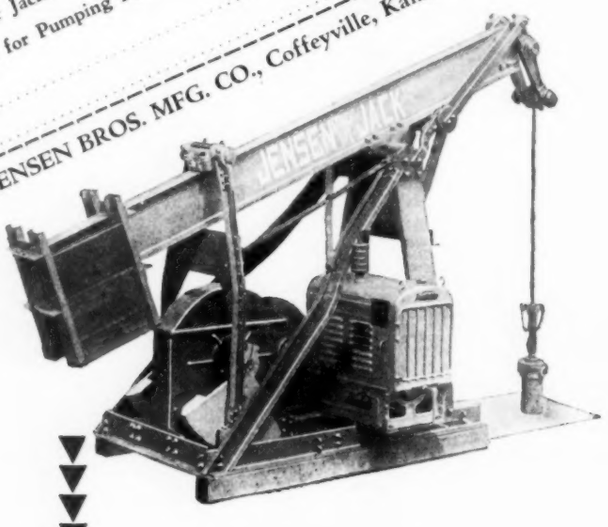
HOTEL PENNSYLVANIA

39TH & CHESTNUT ST. PHILADELPHIA

Send me
a folder on
☐ Gas Engine Jacks
☐ Electric Jacks
☐ Jacks for Pumping Powers

Name .....
Address .....

Mail it to: JENSEN BROS. MFG. CO., Coffeyville, Kansas, U. S. A.



Information....

....on double-drive double-strength Jensen Jacks has saved a lot of producers a mint of money, here and abroad. Don't wait until the last minute and then buy whatever is handy. Use the coupon NOW!

JENSEN JACKS

Export Office:
136 Liberty St., New York

Representatives:
Dunigan Tool & Supply Co., Breckenridge, Texas
Petroleum Equipment Co., 2800 S. Alameda St., Los Angeles, Calif.

JENSEN
ELECTRIC, GAS AND POWER DRIVEN
JACKS

Athey
Truss Wheel
Oil Field Wagons

Ideal for heavy duty behind tractors, either singly or in train. • • • Made in 10, 15 and 20-ton capacities for hauling heavy loads where transportation over soft ground is a problem. • • • • • • • Write for complete information.

ATHEY TRUSS WHEEL CO.
130 North Wells Street .. Chicago, U. S. A.
Cable Address: "Trusswheel, Chicago"
Foreign Representatives . . . Baldwin Locomotive Works, Philadelphia, Pa.

KANSAS

MORTON COUNTY — Hydraulic Oil Co., State land 1, nw se, 22-34-43w, sd 3460 ft.

STEVENS COUNTY — McNabb and Mid-Kansas, Rinehart 1, c ne, 23-32-39w, 15-inch 570 ft, td 1612 ft, sd.

COWLEY COUNTY—Tom Fine, Boyd 1, nw ne, 32-32-4e, 12-inch 1265 ft, sd 2650 ft. Roth and Farrot, Reidy 1, c sw nw ne, 8-32-4e, sd 1040 ft.

HARPER COUNTY—Beeker et al, Bear 1, c ne, 21-31-6w, td 1830 ft, sd.

KIOWA COUNTY—Phillips-Prairie, Bean 1, ne se 10-30-17w, 3950-55 ft, td 5200 ft, ur 6-inch.

BARBER COUNTY—Allison & Fitzwilliams, Kumberg 1, c se sw se, 3-30-12w, 4370 S. O. 6-inch 4860 ft, td C. O.

SEDGWICK COUNTY—Buck et al, McNaaman 1, c ne nw nw 2-20-1e, rig.

KIOWA COUNTY—McKenna et al, Ralston 1, c ne, 14-28-30e, ru sd.

BUTLER COUNTY—Farrell et al, Sutter 1, nw c 18-28-7e, td 1875 ft, sd.

SEDGWICK COUNTY—Streeter & Stearns, Tobin 1, c sw se ne, 5-27-2e, dr 2085 ft.

PRATT COUNTY—Wilcox, Unknown 1, sw nw 7-26-15w, sd 4446 ft.

FORD COUNTY—Swain et al, Kenthorn 1, c nw, 21-25-24w, 6-inch 4308 ft, sd 4315 ft.

MARION COUNTY—Maidwell, La Master 1, nw c, 31-22-4e, sd 650 ft.

COFFEY COUNTY—Hegberg et al, Kroft 1, se sw se, 30-22-14e, 10-inch 818 ft, sd 1150 ft. Roberts et al, Hay 1, sw se nw 32-22-15e, td 1250 ft, sd.

PAWNEE COUNTY—Phillips, Cuthbertson 1, c ne, 27-20-18w, 8-inch 3907 ft, C. O. 4079 ft, td.

BARTON COUNTY—McCool et al, Tsern 1, c sw se ne 12-20-11w, sd 1600 ft.

RICE COUNTY—Gypsy, Koenig 1, sw ne, 10-20-10w, dr 2200 ft.

RUSH COUNTY—Dewey & Mitchell, Greenwalt 1, c sw, 17-19-16w, ru.

RICE COUNTY—Skelton Oil, Ott 1, c se se, 16-19-14w, sd 820 ft. Muth Bros., Beyers 1, ne nw 21-19-9w, 2000-2002, 3M gas 6-inch 3070 ft, td C. O.

McPHERSON COUNTY — United Pet. & Shell, Kaegi 1, ne c, 20-19-1w, sd 1785 ft. Henderson & Holden Sommerfield 1, c ne sw 23-19-1w, td 2917 ft, ur 8-inch.

LYON COUNTY—Griffith et al, King 1, nw c 8-19-10w, 12-inch 910 ft, sd.

RUSH COUNTY—Syndicate Oil, Tannen 1, c sw 11-19-16w, dr 3290 ft.

RICE COUNTY — Allison & Fitzwilliams, Blake 1, ne nw, 9-18-10w, rig.

McPHERSON COUNTY—Alladin Pet., Larson 1, c nw, 22-18-4w, rig.

MARION COUNTY—Alladin Pet., Rudolph 1, nw ne, 36-18-3e, rig.

NESS COUNTY—Gypsy, Coleman 1, c sw ne, 25-17-25w, 2363-75 ft, S.O.&G., dr 2615 ft.

ELLSWORTH COUNTY—Aylward et al, Stratman 1, c se nw se, 1-17-10w½ spd.

McPHERSON COUNTY—Slick et al, Sandell 1, c sw sw, 35-17-3w, 2390-2405 ft, hfw dr 2475 ft.

MORRIS COUNTY—Urschell et al, Bersuch 1, c nw se nw 10-17-7e, ru sd.

ELLSWORTH COUNTY—Alladin & Marland, Barecky 1, c nw, 3-16-10w, 8-inch 2718 ft, sd. Alladin et al, Stoddenbert 1, c sw, 22-15-10w, sd 1130 ft.

MORRIS COUNTY—Great Basin Oil, Ballyntine 1, c sw se se, 18-16-5e, td 1300 ft, fsh. Hankenson et al, Cessnum 1, sw se 24-16-9e, rig.

ELLSWORTH COUNTY — Milton et al, Kaster 1, se ne 6-14-9w, sd 330 ft. Hershey et al, Schultz 1, c ne, 9-14-8w, rig.

SALINE COUNTY—Sampson et al, Sudendorf 1, ne se 30-14-2w, dr 2420 ft.

OSAGE COUNTY—Riggs-Smith, Wood 1, c se nw, 31-14-15e, sd 410 ft.

GOVE COUNTY—Valerius et al, Todd 1, nw c 24-13-27w, 3585 ft wat, td 4666 ft, rng 5-inch and sd.

RUSSELL COUNTY — Austin Drlg. Co., Rockefeller 1, se c 6-13-12w, T. Oswald 3003 ft, oil 3042-44 ft, bailed 18 bbls in 3 hrs, 6-inch 3044 ft, sd.

SALINE COUNTY—Twin Mounds Oil Co.,

Weis 1, c w½ ne nw, 30-13-4w, 10-inch 1010 ft, sd 2710 ft.

DICKINSON COUNTY—Severs et al, Livingood 1, ne sw 13-13-2e, TL 2315 ft, 3047 ft hfw, sil L. 3060 ft, dr 2310 ft.

GOVE COUNTY — Johnson & Atlantic, Wright 1, c se ne 11-12-27w, 3500-3510 ft hfw, 3815 ft hfw, 6-inch 4050 ft, C. O.

RUSSELL COUNTY—Gilbreath et al, Bratton 1, c ne, 33-11-13w, td 2335 ft, sd.

GRAHAM COUNTY—Schleimer et al, Clark 1, c sw ne ne 11-9-25w, T. Big L. 3465 ft, td 3790 ft, fsh.

CLAY COUNTY—Nebraska Oil, Tivier 1, sw c 19-8-9e, sd 2390 ft.

WASHINGTON COUNTY—Simcox, Penwell 1, nw se ne 16-3-3e, 6-inch 1210 ft, sd 1720 ft.

RAWLINS COUNTY—Danciger et al, Unknown 1, sw c 3-2-35w, sd 2005 ft.

COLORADO

ADAMS—N. M. Slatt's Hills 1, se 27-2-64w, ready to resume at 2500 ft.

ARAPAHOE—McDebb Drlg. Co.'s Fitzsimmons 1, 7-45-55, dr at 5780 ft. Merrett et al's U. P. 1, nw 17-5-64, stand 1600 ft, hfw.

ARCHULETA—Stand. of Colo.'s Fitzhugh 1, se 32-33n-1e, stand 502 ft; Brooks 1, nw 2-32n-2e, spud 30 ft; Wirt 1, nw 34-33n-12, sdtr 105 ft.

BACA—A. R. Jones Oil & Optg. Co.'s Boice Cattle 1, 22-34s-42w, ur 6⅝-inch to 4360 ft.

ELBERT—Belmont Oil Co.'s Maher 1, se 4-6s-59w, prep to res 3720 ft.

EL PASO—Utemore Synd., Cannon 1, ne 10-16s-66w, stand 1100 ft.

HUERFANO—Parker Club, Fee 1, se-4-28s-68w, sd 4116 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-59w, dr at 3819 ft .

LAS ANIMAS — Oklahoma Drlg. Assn.'s., Radcliffe 1, ne 28-28-52, sd 100 ft.

LA PLATA—McGarr Pete Co.'s Pinon Mesa, ne 34-33n-12, prep to spud. Klem Pete Corp.'s Olbert 1, se 9-25n-12w, dr 3075 ft. Murchison Oil Co., Doescher 1, nw 29-33n-13w, sd 1225 ft, for winter.

LINCOLN—Kelley Oil Co.'s State 1, 36-14n-57w, st nd 3380 ft.

MOFFAT—Mtn. Fuel Supply's State 2, tract 37-12-100, dr 1240 ft. S. H. Keoughan et al's State 1, sw 16-4n-101w, dd 2950 ft. Texas Prod. Co.'s Wick 4, lot 10, fsh 4646 ft.

MONTEZUMA—Haller et al's Haller 3, ne 33-36n-14w, stand 902 ft.

MORGAN—Ind. Terr. Illum. Oil Co.'s State 1, ne 16-1n-57w, dr 4010 ft.

PUEBLO — North American O&L Co.'s Boescher 1, 7-22-66, dr at 1185 ft. Anchor Oil Co.'s Easley 1, sw 35-22s-67w, dr 446 ft.

PARK—So. Park Oil Co.'s Milligan 1, se 13-9s-76w, dr 1615 ft. So. Park O&G Co.'s Esche 1, ne 6-9s-76w, stand 605 ft.

ROUTT—Gorham et al's Omholt 1, 29-4n-87w, sd 115 ft.

WELD—Eastman Oil Co.'s Steele 1, ne 14-2n-67, sd 165 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4-56, dr 1724 ft.

NEW MEXICO

CHAVES—Warman Oil Trust, Seibert 1, ne 27-13s-24e, dr 2000 ft.

DE BACA—Matador Oil Co.'s Wood 1, se 6-4n-20e, ready to resume at 3005 ft.

LUNA—Angelus Oil Mining Ass'n 1, se 20-21s-10w, sd 6000 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-18-9w, sd 3255 ft. Wms et al's A.T.S.F. 1, se 19-18n-8w, sdtr 1900 ft. United Kern Pete, Inc., 1, sw 1-18n-11w, lcn.

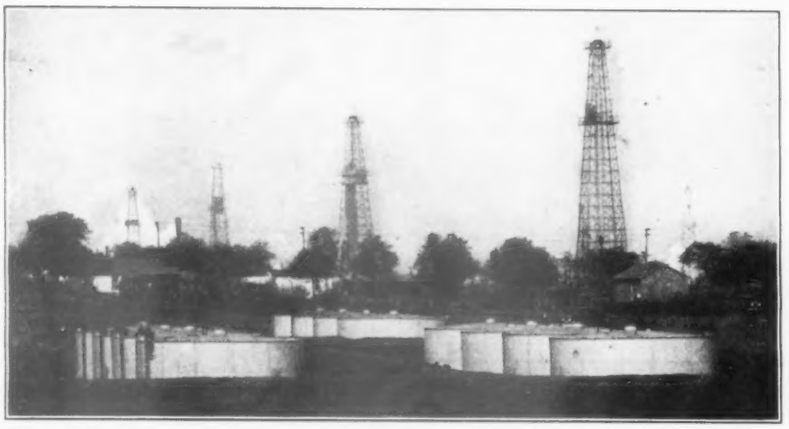
OTERO—Ernest et al's 1, se 20-25s-7e, wtg for equipment, 1328 ft.

QUAY—Silverstein et al's Wetzel 1, 29-12n-33e, stand 175 ft.

RIO ARRIBA—Berringer et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pete Co., Gov't 1, se 14-30n-7w, sd 250 ft. Governador Oil Co.'s 1, se 12-29n-7w, sd 751 ft.

SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, stand 1750 ft. Kutz Canon O&G Co.'s Day 1, se 20-28n-10w, dr 2045 ft. Childers Dr. & Pr. Co.'s Westwater 2, nw 23-31-16w, se 2525 ft. Rio Grande Dev. Co.'s 2, 9-29-11w, stand 1380 ft. Continental Oil Co.'s Rattlesnake 24, 1-29-19w, wait for equipment 4465 ft. J. B Witt O&G Co.'s Mangum 1, se 33-29n-11w,

Twelve 500-Bbl. Low Type Maloneys erected in the Oklahoma City Field by Maloney Sales Corp., distributer.



You can be SURE your oil is kept SAFE by using our Vapor-Pressure Stock and Flow Tanks

- Efficient valves set at 16 oz. pressure and 2 oz. vacuum restrict breathing.
- 12 gauge (or heavier if desired) Keystone Copper Steel throughout insures durability.
- Heavy 2x2 angle ties and reinforcements, with wide gussets on ties and ladders and half-inch heat-treated bolts, give ample strength.
- High grade aluminum paint reduces temperature variations.

Increase your income from oil production by using our *Vapor-Pressure* Tanks and eliminating unnecessary waste.

Maloney A. P. I. Bolted Steel Tanks conform to A.P.I. dimensional standards and carry the official A.P.I. monogram.

"Alone in Quality"

MALONEY TANK MFG. COMPANY
Tulsa, Oklahoma, U. S. A.
Distributers at All Principal Petroleum Points

MADE OF KEYSTONE AMERICAN COPPER STEEL

MALONEY PATENTED BOLTED COPPER-STEEL TANKS

MALONEY ALONE

mvg in. San Juan Leaseholds, Bowman 3, ne 30-30n-15w, dr 2535 ft.

SAN MIGUEL—Pioneer O&G Co.'s Thunderbird 1, nw 14-15n-16e, wait 2375 ft. Starr Oil Co.'s Adams 1, ne 25-17n-16e, ur 6⅝-inch at 3356 ft. Cibola Pete Co.'s Crown 1, se 9-13n-14e, dr 840 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 12-12n-22e, dr 1542 ft. Kull et al, Cherryvale 1, ne 34-17n-21e, ready to spud.

TORRANCE—Williams et al's Staplin 1, ne 16-8n-10e, stand 1643 ft. J. B. Witt O&G Co.'s Kutchem 1, 12-17-7e, dr 1465 ft.

VALENCIA—Acme Oil Co.'s N. M.-Ariz-Land Co.'s 1, 26-6-3, dr 5000 ft. Harlan et al's Harlan 1-A, 5-6n-2e, dr 3810 ft.

WYOMING

BIG HORN—Westland Oil, Inc., 24-54-95, gas at 51 ft. Wisconsin Holdings, 5-55-97, sd 665 ft. Yellowstone Pete. Co. 1, 7-57-97, sd 4080 ft.

CARBON—Midwest Refining Co.'s U. P. 27, 11-20-81, sd 1810 ft. Petroleum Exploration Co. of California, 29-23-89, dr 900 ft.

CONVERSE—Converse O&G Co., 27-33-72, sd 1410 ft. Pioneer Oil Co., 5-31-70, to dr new test.

FREMONT—Texas Prod. Co.'s State 1, 36-44-95, dr bel 4485 ft. P. & R. 1, 33-34-92, sd 4906 ft Yellowstone Oil Co. 1, 15-39-92, td 185 ft. Ward O&G Co., 28-34-90, gas show 1500 ft. Maghee et al 2, 35-33-99, dr bew hole 360 ft.

LINCOLN—Mountain Oil Corp. 1, 36-25-116, dr 1500 ft. Wyo. Prod. Co., 14-24-113, dr bel 1000 ft.

NATRONA—Summit Oil Co., 21-33n-80w, dr 1000 ft. Midwest Oil Co. 11, nw 32-34n-77w, dr 4821 ft. Cuyler Oil Co., 23-36n-85w, rig.

NIOBRARA—West Virginia Synd., ne 7-35-62, td 987 ft, cas trouble.

PARK—Resolute Oil Co., 17-57-101, completing at 8250 ft.

SWEETWATER—Vermillion Oil Co. 1, se 16-12-99, sd 3500 ft.

UNITA—Park City O&G Co. nw 6-15-113, dr bel 2400 ft.

MONTANA

CASCADE—Andover Oil Co.'s Floweree 1, 20-21-2w, fsh bailer 1300 ft.

FERGUS—Northern State Oil Co.'s Woodward 1, se 20-14n-24e, td 1000 ft, cas trouble. Melton Corp, 24-21n-17e, ur 2645 ft.

GLACIER—Fulton Pete. Corp.'s Blackfeet 1, ne 28-36n-12w, plug back to 820 ft to cem. B&H Oil Co.'s Haines 1, se 2-34-6w, dr 267 ft. Jeffries-Hoerr's Dawson 1, ne 7-31-12w, dr 3000 ft.

GOLDEN VALLEY—Texas-Pacific 1, sw 21-8s-21e, dr 2350 ft.

JUDITH BASIN—Newton-Waddingham, se 15-16n-10e, dr bel 1110 ft. Pownam Oil Co., se 24-19n-11e location.

LIBERTY—Northland O&G Co.'s Yurman 1, 32-33-52, sd 3475 ft. Sunburst's McLaren 1, se 9-37-6e, sd 3115 ft. Utopia Oil Co.'s Eleanor Ass'n 1, sw 11-33-6e, td 3190 ft. Perkins et al's Brown 1, nw 24-35-54e, sd 150 ft.

POWDER RIVER—Creel et al, 7-8s-50e, dr 1200 ft.

ROSEBUD—Prairie O&G Co. 1-X 26-10-39e, dr in shale 2100 ft. Prairie 1, Contract 4, 28-10-38, dr 1355 ft.

TETON—Andover Oil Co.'s Carlson 1, 5-24-4w, stand 150 ft.

TOOLE—Liquid Gold Oil Co.'s Roberts 1, ne 25-36-12, dr 1000 ft. International Roy. Hold. Co.'s Henry 1, sw 26-35-36, dr 2510 ft. A-1 Petroleum Co., se 24-36-1e, location.

PHOTOGRAPHS

Trained men ready to photograph your equipment whether in your shops or working in the field.

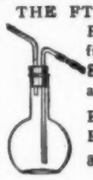
"28 Years Making Industrial Photos"

LITTERST COMMERCIAL PHOTO COMPANY

2007 Polk Ave. Phone Preston 0703

HOUSTON, TEXAS

THE FT. WORTH LABORATORIES



Field Gas Testing. Analysis of oil field brines, gas minerals and oil. Bell Thermometers, Hydrometers and Laboratory Glassware.

F. B. Porter, B. S., Ch. E., Pres.
R. H. Fash, B. S., Vice-President
828½ Monroe St. Ft. Worth, Tex.

Petro Oversize Valves are manufactured by pumping equipment specialists — who are in contact with actual conditions in the field and with men responsible for production.

Petro Oversize Standing Valves will increase production — permitting slower pumping and longer life of all equipment.

Compare a Petro Oversize Standing Valve — it reflects the high quality of steel, the care and precision of manufacture . . . then test it under the most severe conditions . . . the result is more convincing than 800 testimonials.

Immediate Shipment

Your supply store can secure immediate shipment of Petro Oversize Standing Valves within two hours after your order is received.

McCollum Exploration Co.

Contracts taken for Seismograph Work

UNITED STATES
5522 Connecticut Ave.,
WASHINGTON, D. C.

FOREIGN COUNTRIES
1211 Esperson Bldg.,
HOUSTON, TEXAS

Official Photographers for The OIL WEEKLY

In the Gulf Coast Territory—
Specialists in Oil Field Equipment

Merchant-Thayer & Co.

415 Louisiana St. Preston 2526

HOUSTON, TEXAS

Successors to

Calvin Wheat Commercial Studio

PATENTS

JESSE R. STONE
and LESTER B. CLARK

Patents, Infringement Litigation, Trade Marks

Associated with
Andrews Streetman Logue & Mobley
2200 Gulf Bldg. Houston, Texas
Preston 3949

T. A. BROWN,
Oil Field Specialties

Gumbo-Buster Rotary Equipment.
Cameron Blow-out Preventers.
Layne & Bowler Screen, Packers, Etc.
American Iron Works Fishing Tools.
Care of Amer. Consul, Maracaibo, Venez., S.A. and Port of Spain, Trinidad, B.W.I.

HEYDRICK'S NEW MAPS

WEST TEXAS

County Maps

Combination Maps

Descriptions and prices on application

HEYDRICK MAPPING COMPANY

Wichita Falls, Texas

PATENTS

Patents Obtained and Trade Marks and Copyrights Registered

HARDWAY & CATHEY
428-29-30 Bankers Mortgage Bldg.
Phone Fairfax 8232 Houston, Texas

HIRSCH, BROWN AND SUSMAN
Attorneys at Law
32nd Floor Gulf Building
Houston, Texas
Specializing in Oil Law and Land Law

LETTERS

Dear Sirs:

I am now in Baku field and have met your Mr. Leigh, who has made THE OIL WEEKLY popular in the Baku fields.

I have been asked about your article in the October 17 issue, "Vibrating Screen Cleans Mud," by Brad Mills. The readers here are much interested in this but find it difficult to reconstruct the apparatus mentioned from the description. Kindly send me a more detailed description of the way the springs are mounted, and the manner of attaching motor to screen.

R. C. BECKSTROM,
Baku, U. S. S. R.

Mr. Beckstrom has been answered under personal cover by Mr. Mills, author of the article to which he refers. The equipment is made by Link-Belt Company, from whom it can probably be more cheaply purchased than imitated. (See page 101-102, THE OIL WEEKLY, October 24, page 28; December 12, 1930, page 80; January 9, 1931.

* * *

Dear Sirs:

It may be of some interest for you to tell, that at the annual meeting of our association "Kolo Gorniczo-Naftowe," December 6, 1930, the following officers were elected:

J. Kaczorowski, president.
P. A. Gawlinski, vice president.
T. Slaczka, secretary.
Cz. Mikuszewski, treasurer.

Now we have much pleasure in stating the issues of THE OIL WEEKLY that have been received from you during the whole of 1930 are of most excellent value. We are much interested in matter contained in THE OIL WEEKLY and we have nothing but praise for the articles appearing in it.

We wish to convey to you the greetings of the whole staff and cordial thanks for the friendship of 1930, and we ask you to accept our heartiest good wishes for your prosperity and happiness in the coming year.

Petroleum Engineering Students' Ass'n., "Kolo Gorniczo-Naftowe" of Oil-Mining Faculty at Technical College in Lwow.

By KACZOROWSKI JULIUS,
Lwow, Poland. President.

* * *

Dear Sir:

Permit me to call your attention to the errors on page 28 of the December 19 issue, in which the various intake or key wells at Haynesville are mentioned as taking 60,000,000 to 100,000,000 cubic feet of gas per day. The size of the tubing and casing in these wells is such that no pressure differentials could possibly force this much gas into the wells. The author of the article apparently recognizes this fact in later parts of the same article where the correct quantities are used, i.e., 60,000 to 100,000 cubic feet per day.

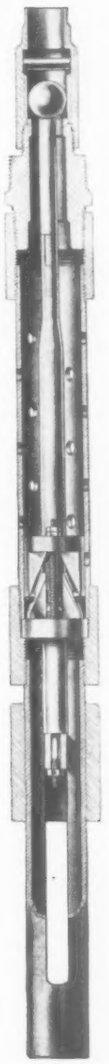
EUGENE A. STEPHENSON,
Missouri School of Mines.

Apologies for a type-setter who in lifting the abbreviation M to figures added on some extra naughts. As pointed out, correct figures later make the error obvious.

Fluid Operated

Granger Tubing Bleeder

Controls Rate of Drainage



Quick Facts!

1. Preserves Formation
2. Saves Two Hours Pulling Time
3. Leaves Oil in the Well
4. Prevents Fire Hazard
5. Prevents Slippery Floor Accidents
6. Easy to Install and Operate
7. Adaptable to Any Pump

Price $90.00

Nearest Shipping Point

GRANGER INDICATOR CO., Dept. 2-B,
137 N. Greenleaf St., Whittier, Calif.

Without obligation on my part, please send me full information about the Granger Tubing Bleeder.

Name .....
Position .....
Company .....
Address .....

Granger Indicator Co.

Main Office
137 N. Greenleaf, WHITTIER, CALIF.
Mid-Continent Branches
320 East 11th St., Tulsa, Oklahoma
R. L. Melton, Mgr.
120 Main St., Seminole, Oklahoma

ALLSTEEL THROUGHOUT

CADWELL ALLSTEEL TRADE WELL
REG. U. S. PAT. OFF.

HYATT BEARINGS

QUALITY IS ALWAYS ECONOMY
MANUFACTURERS OF
OILFIELD WINCHES, PIPELINE WINCHES AND BACKFILLERS
Auxiliary Equipment For "Caterpillar" Tractors

ALLSTEEL PRODUCTS MFG. CO.
CABLE ADDRESS "ALLSTEEL"
PHONES L.D. 126; 4-4381 L.D. 289: 4-4382
WICHITA, KANSAS U. S. A.

DIAMOND CHAINS

NIKROME SHAFTS

PROFESSIONS ARE PERSONAL TRUSTS

A deep personal trust in the knowledge and experience . . . . the ethics and judgment . . . . of your doctor . . . . your lawyer . . . . your dentist . . . . is the sterling structure on which professions are built. . . . . On the same basis, ... this standard that has given to the professions their background . . . . their definite place in our lives . . . . this institution is grounded. . . . . Our policy . . . . that of rational adherence to this ideal . . . . marks every transaction of our Trust Department. . . . . A consultation involves no obligation.

SECOND NATIONAL BANK
MAIN AT RUSK
HOUSTON, TEXAS

New Equipment for the Field

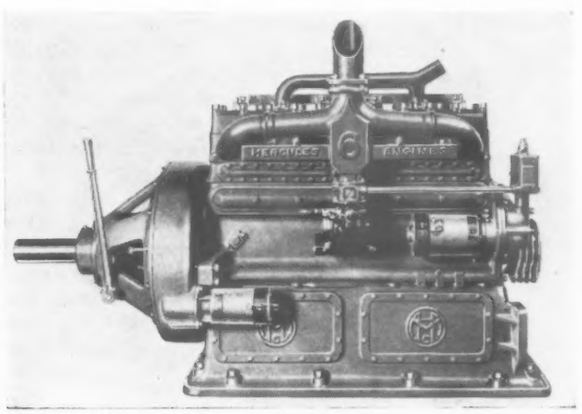
Machinery - Tools - Catalogs - Books

Heavy Duty Engines

HERCULES MOTORS CORPORATION

Hercules Motors Corporation, Canton, Ohio, announces an additional line of heavy duty six-cylinder engines of the "L" head type. This series, known as the "HX," is produced in five sizes: the HXA 4¾ by six-inch, displacement 638 cubic inches; the HXB, five by six-inch, displacement 638 cubic inches; HXC, 5¼ by eight-inch, displacement 770 cubic inches; HXD, 5½ by six-inch, displacement 885 cubic inches, and the HXE, 5¾ by six-inch, displacement 935 cubic inches.

Horsepower developed by Hercules "HX" series engines at speeds from 400 r.p.m. to 2000 r.p.m.



Hercules HX Series six cylinder engine

All engines in this series differ only in the bore and such parts as are thereby affected. The crankcase is cast separately from the cylinders. The crankshaft is supported on seven main bearings, 3½ inches in diameter, the total projected area of the seven main bearings being 58 3/16 square inches.

The cylinders are cast in pairs of three. The heads are removable and so designed as to accommodate two sets of spark plugs where double ignition is desired.

The lubricating system consists of a full-pressure type, gear-driven oil pump of great capacity, with a double-scavenging pump arrangement which assures proper circulation of the lubricant carried in the oil pan; even though the engine may be operating to a marked degree off of horizontal.

An oil purifier mounting is provided; likewise consideration has been given to effective air cleaners. A fuel pump drive is also provided and an auxiliary "V" belt drive for large size generators.

The water pump delivers 135 gallons per minute at 2000 r.p.m. This large volume of heat-dissipating water, which sweeps the surfaces to be cooled through unrestricted passages, eliminates all tendencies for the development of hot spots, or "pockets."

Recent developments in downdraft manifolds have resulted in this type being offered on the HX series. However, improved updraft manifolds are also available.

The suspension of the Hercules HX series engine is available in either the three or four point type and with a choice of either Number 00, Number 0 or Number 1 S.A.E. bellhousing. Either a sleeve or "base" type of generator is provided for, and for mounting a starting motor a Number 2 S.A.E. "flange" type mounting is provided.

The design has been developed to accommodate an air compressor, driven from the crankshaft. Or the air compressor can be installed as a side mounted unit if preferred. Both battery and magneto ignition units can be mounted. The camshaft is supported on eight bearings, all 2⅜ inches in diameter. It is located on the right hand side when viewed from the flywheel end of the engine.

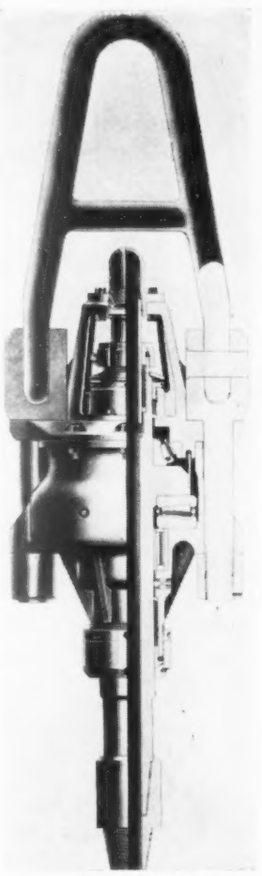
The same standardization of design has been carried out in the HX series as in all other engines produced by the company. Special attention has been given to proper cooling, particularly of the valves. Valves operate through valve guides which are exceedingly well cooled.

Oil Well Swivel

GRAY TOOL COMPANY

Gray Tool Company of Houston has recently developed a new Timken-equipped oil well swivel, to be known as the Type B. It is designed for particularly heavy duty service, having a load capacity of 422,000 pounds at 100 r.p.m.

The entire suspension consists of alloy steel forgings. The three-inch wash pipe is also of hardened and ground tool steel. The method of suspension used is one of the characteristic features of the swivel. It consists of a bail which is pinned to the tops of two heavy members that extend the length of the swivel body. The side members fit in lugs cut in the body, and are held at the bottom by large screw caps that are locked against movement by set screws. The bail proper is braced by a cross member that adds considerably to its strength, and permits a lighter than ordinary construction.



Gray Elevator

This construction offers advantages. It provides a straight pull on the swivel to equalize the load on the bearings. The weight of the swivel, and the pipe, is carried below the point where the bail is connected to the rods, making the hook-up hang straight.

The rotating member is carried on two Timken and one straight roller bearing. The lower, or main bearing is of the tapered thrust type, mounted so as to carry the

full rotating load of the swivel pipe. The upper is a radial bearing having a high thrust capacity, the function of which is to help keep the swivel stem in alignment, and equalize the load on the thrust bearing. It is also possible to use blocks to obtain additional weight on the bit when rock is encountered near the surface. Grease lubrication is used, and the space around the bearings provides an ample reservoir for lubricant storage.

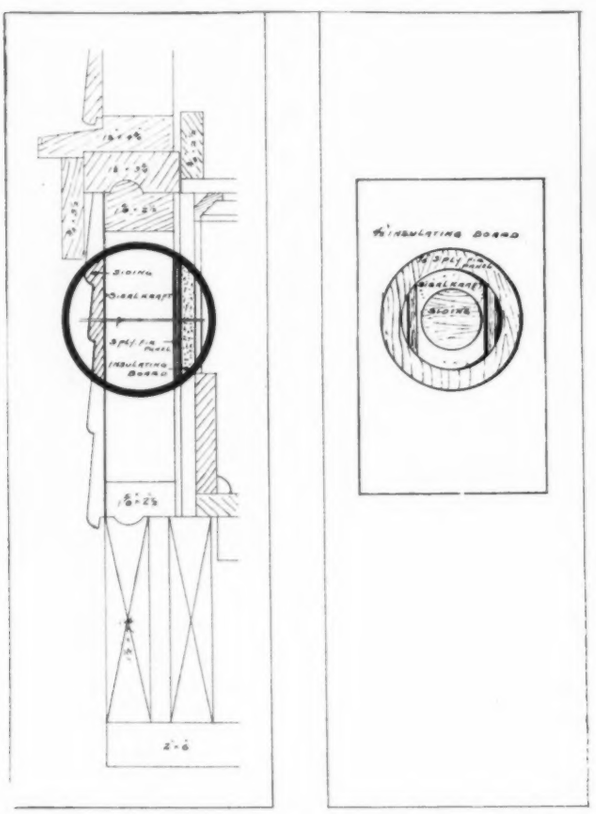
The lubricant is retained in the swivel by packing glands, one around the goose neck, and the other around the stem below the lower bearing. Since outside gland nuts are used, packing can be inserted without having to work it past threads in the gland. Tightening the outside nut applies sufficient pressure to make the packing tight in the gland. In the lower gland the packing runs against a ground tool steel liner to prevent cutting, and reduce the frequency of repacking. The upper bearing is surrounded by a retaining ring, which forms an individual closure. This has been provided as a precaution, so that there is always a sufficient supply of lubricant for that bearing even when the level in the swivel proper is low.

Sectional Houses

SOUTHERN MILL & MANUFACTURING COMPANY

Southern Mill & Manufacturing Company, 515-525 South Troost Avenue, Tulsa, manufacturer of sectional houses for oil fields, announces some added features in construction and design for the purpose of increasing especially the comfort of this type of house.

An accompanying illustration shows the four-ply wall made by this company, including a layer of Sisalkraft paper which is used on the outside of the studs and directly under the siding to make the wall vermin proof and also to add toughness. Sisalkraft is a building paper with a black pitch substance and a fiber between the two plies. Into the walls of the construction the company is placing Inso board, an insulating board made from wheat straw. The Sisalkraft contacts a quarter-inch laminated veneer panel, the type used in door bottoms, which has a higher insulating value than the same thickness in solid wood.



Showing wall construction used by Southern Mill & Manufacturing Company

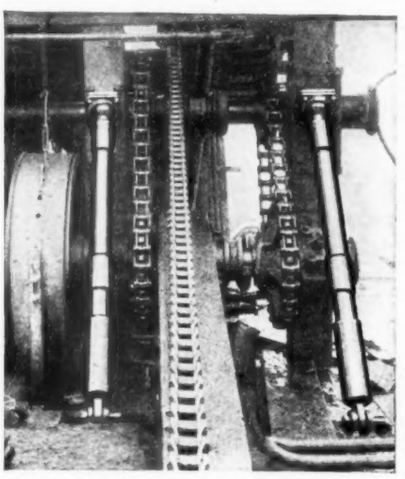
The four 2 x 3 studs in each section are No. 1 yellow pine, spaced 16 inches on centers but equal to 12 inches on center in actual strength because there are four studs in each four-foot section, offering additional strength over standard construction.

A sample of the actual material of three plies, namely, Sisalkraft, one-quarter-inch laminated veneer panel and Inso board will be mailed to oil companies upon request.

New Brace

INTERNATIONAL DERRICK & EQUIPMENT CO.

International Derrick & Equipment Company announces a new brace designed for supporting the Samson post or drawworks headboard. It is intended for use with rotary or standard rigs and may be used with wood or steel Samson posts or headboards.



Ball and socket construction is to insure rigidity and permit the braces to be used at any angle. Built with right and left-hand threads, they are adjusted to the proper length and slack caused by wear taken up. This is done by loosening the socket joint sufficiently to permit the ball to turn freely, unlocking the lock collar and adjusting the brace to the proper length. When this is done the collar is locked and the socket joint tightened. The braces have 16 inches of adjusting space.

The floor or bottom brace consists of a clamp plate, swivel lug, lock collar, long threaded nipple and a collar for attaching a section of pipe. The top brace unit consists of a post brace, collar and ball, making a ball and socket joint. The side post brace unit consists of a post brace, collar and ball, the brace and collar forming a socket for the ball. These connections are made of chrome nickel steel.

It is simple in design, easy to erect or dismantle, and may be moved readily from rig to rig as needed.

Worthington Pump & Machinery Corporation, Harrison, New Jersey, announces the publication of a 44-page bulletin, D-423-B1, superseding D-704, covering power pumps vertical triplex. It is cut for insertion in loose-leaf folders, and will be furnished upon request to the above office or to the executive offices at 2 Park Avenue, New York City. The publication opens with showing parts of these power pumps, and takes the reader through to installations on the job at the close of the bulletin.

Manufacturers and Supply Dealers Notes

Happy Belting Company, Tulsa, has recently mailed out a four-page folder describing the No. 3 Happy vertical belt tightener for beam wells, the Happy E-C (engine countershaft) vertical belt tightener for countershaft belt, and the Happy automatic belt idler for band wheel powers. Working illustrations taken from actual photographs of these products on the job are included in the descriptions. A copy is available upon request to the home office or through the El Dorado, Arkansas, or Seminole, Oklahoma, branches.

Universal Engineering Company, 2369 East 51 Street, Los Angeles, announces Catalog supplement No. 2-A, covering the Zublin interchangeable bit cutters. This supplement is in the form of a four-page illustrated folder, giving different views of these cutters. A detailed layout of design and parts of the Zublin bit are shown and described.

Modern Engineering Company, 3411 Pine Boulevard, St. Louis, offers to men interested in welding equipment a 64-page catalog, No. 105, devoted to Meco oxy-acetylene welding-cutting equipment. This catalog is complete to detail, carrying full descriptions and pictures of all parts of the company's equipment, codeword, price, etc.

The Foxboro Company, Foxboro, Massachusetts, recently issued Bulletin No. 170 on automatic flow controllers. It runs 40 pages and covers the complete field of flow control. It also includes ratio flow control, liquid level control and flow control under high pressures. This, the company's latest publication, may be secured by writing the company at 38 Naponset Avenue, Foxboro.

Hercules Motors Corporation, Canton, Ohio, has published a loose-leaf catalog on Hercules engines of all types, in which the design, construction and operation are presented. Performance charts on Hercules engines go to make the photographic and line drawing illustrations and descriptions complete. A copy is available upon request.

Sperry-Sun Well Surveying Company, 1608 Walnut Street, Philadelphia, announces the publication of "Surwell Service," a 24-page booklet on the surveying of crooked holes by use of the Sperry-Sun method. The vast amount of research on the crooked hole subject which the publishers of this booklet have made passed it along to the reader. Causes and effects of crookedness of holes is taken up and the reasons for surveying wells is given. Methods employed for determining orientation, followed by an explanation of the principles of the gyroscope. The Surwell gyroscopic clinograph is described and its operation explained. Operators having to do with the problems of crooked holes will be mailed one of these booklets upon request.

Caterpillar Tractor Company, Peoria, Illinois, has turned out a unique booklet titled "Traction for Action," a pictorial outline of how traction is obtained and the unusually inconvenient locations on which the Caterpillar is used. The Caterpillar Ten, Fifteen, Twenty, Thirty and Sixty are shown in action in the size jobs for which they are designed. The most important working conditions under which the tractors operate are shown in graphic scenes from photographs. Interested persons may secure one of these booklets by writing the address given above.

Oil Well Supply Company, Oil City, Pennsylvania, has published Bulletin No. 94, devoted to describing "Oilwell" boilers. This bulletin takes up individual parts in picture and explanation, while tabular layouts take up specifications on the boilers. An interesting page is that devoted to chain mountings, showing feasible transportation of the boilers. Two illustrations are given of mounted boilers, the A. S. M. E. code boiler with dome over the fire box and the A. S. M. E code boiler with dome over the barrel. Oil Well Supply Company will mail a copy of this bulletin upon request to the home office.

Coffing Hoist Company, 317 East Van Buren Street, Danville, Illinois, announces the publication of a 24-page booklet describing and illustrating Models A, F, F-S and Z hoists, a hoist for all purposes and types of work. Working illustrations of these various type hoists on the job are shown. Capacities and uses for the various types may be had by writing the company for a copy of this booklet.

A. M. Byers Company, Pittsburgh, offers a booklet describing its new method of manufacturing wrought iron under the Aston patents. This booklet is entitled "An Important Contribution to Metallurgy." A copy will be forwarded to companies or individuals interested in this subject.

Bradford Motor Works, Bradford, Pennsylvania, has issued a loose-leaf booklet showing and describing B. M. W. products, including balls and seats, polish rods, the B. M.W. Admore liner barrel, working valves and other pumping equipment, and will supply interested operators with a copy of the booklet.

Landis Machine Company, Waynesboro, Pennsylvania, announces two new bulletins descriptive of the Victor receding chaser collapsible taps and the Victor collapsible and solid adjustable taps, respectively. Both bulletins are profusely illustrated and carry specifications on these two new products. Either or both are available upon request to the home office of Landis Machine Company.

Doheny Stone Drill Company, Los Angeles, will mail upon request copies of the new booklet, "The Story of Controlled Drilling," a pictorial outlay on the Hydril for controlled drilling. This booklet takes up separately the various pieces of equipment used in the Hydril assembly, with description and illustrations.

Petroleum Rectifying Company of California, 714 Securities Title Insurance building, 530 West Sixth Street, Los Angeles, has published "The Electric Dehydrator," an interesting house organ for the purpose of giving information on "cut" oil in general and on the Petreco process of electrical dehydration in particular. It is a four-page publication, well illustrated, 8½ by 11 inches in size and punched so that it is suitable either for filing in standard letter files or binding in standard ring or post binders. Copies may be obtained by writing the company at the address given above. Some interesting articles on electrical dehydration, results and field conditions, are planned for future issues.

SQUEAKS FROM THE BULL WHEEL

Young Willie to the pharmacy
Proceeds with every mark of glee,
To purchase castor oil he goes,
And why he's happy no one knows,
Unless—ah, there you have it, Mister,
The oil is for his little sister!

Boss: "Rufus, did you go to your lodge meeting last night?"

Rufus: "Nah suh. We dun have to pos'pone it."

Boss: "How is that?"

Rufus: "De Grand All-Powerful Invincible Most Supreme Unconquerable Potentate dun got beat up by his wife."

"John, you think more of that old radio than you do of me."

"Well, dear, I get less interference from it!"

Judge: "Did you or did you not strike this woman?"

Landlord: "Your Honor, I only remarked that the wallpaper in her apartment bore fingerprints."

Judge: "Two years for knocking her flat. Next case."

He had been to a stag dinner and his wife wanted to hear all about it when he got home.

"Well," he said, "one rather odd thing occurred. Jim Blankton got up and left the table because some fellow told a story that he didn't approve of."

"How noble of Mr. Blankton," exclaimed the wife, "and what was the story, John?"

The following is disrespectfully dedicated to Bert Cleveland, general manager of the Regan Forge & Engineering Company, who was a golf, dinner and "walking" associate and competitor of the publisher of The Oil Weekly out in California a few weeks ago:

He said he had a busted rib,
Then shot a ninety-two.
He said his stomach was the bunk,
Then ordered steak for two.

His arches, too, had fallen low,
He said he couldn't walk,
Then made us trot eight miles or so,
And listen to his talk.

He said his poker luck was bum,
"Had never won a dime,"
But when he had an inside straight,
He filled it every time.

Now if he said his neck was bust,
And heart was leaky too,
And if he said both legs were cork,
And lungs were almost through,

I'd back away and wouldn't bet
A dime against that guy,
I've had my lesson, son, from him,
He wouldn't run, he'd fly!

The tourists climbed to the top of the famous Echoing Mountain. There they saw an old man perched on a rock, a long telescope in his hand. Every few minutes he would let out a series of whoops. The puzzled tourists looked and listened for some time, then one of them asked, "Why do you keep looking through your telescope and yelling as if you were hurt?"

The old man answered impatiently, "If you talk to me you'll detract my attention and I'll lose my job. I'm the echo for this here hill!"

Smith was standing before the judge for having injured his wife.

Judge: "You maintain that you threw your wife out of the second story through forgetfulness?"

Smith: "Yes, we used to live on the ground floor, and I'd clean forgotten we'd moved!"

"We are now passing the most famous brewery in Berlin," explained the guide.

"We are not," contradicted the American tourist, as he hopped off the sightseeing bus.

Two men stood together at a party. They had just met for the first time and one of them sought to make conversation.

Pointing across the room, he said: "Can you imagine why any man would bring any woman as homely as that to a party like this?"

"Sure I can," said the other. "She's my wife and she's so homely that I brought her along so I wouldn't have to kiss her bood-bye!"

A meek little man found a quarter on the street. He had just picked it up when a man walked up and said: "Hey, you that's my half dollar."

"Just my luck," grumbled the finder as he handed it over; "but I guess I'll have to owe you twenty-five cents."

Mother: "If you get a job in the chorus, I hope you won't wear tights."

Daughter: "Oh, but they don't wear them any more."

Mother: "Well, I'm very much relieved to hear that."

She had just told Jack that soon—very soon—there would be a third in their little love-nest.

"My darling!" cried Jack, his face beaming.

"Yes," said the wife, "I had a letter from mother this morning saying she would arrive next Monday."

Deacon Callahan was observed walking down street the other day with an armload of brand new cuspidors.

"What are you doing with all those cuspidors, Deacon?" asked one of the parishioners.

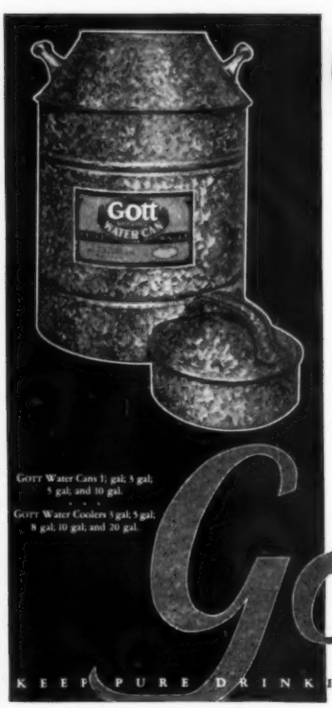
"I'm taking them home for my dog," replied the Deacon.

"What kind of a dog have you?"

"Spitz," replied the Deke.

In a certain western town, a beautiful chorus girl sued a rich banker for breach of promise and was awarded $50,000. Just as she was leaving the court she was hit by an automobile and sustained eight broken ribs. The same judge awarded her $500.

Moral: Never break a woman's heart—break her ribs.



Gott Water Cans & Coolers

The Gott Water Can is the safe, handy way to keep a clean supply of pure water always handy wherever you may be... It's health insurance... *your supply store has them.*

Gotkool

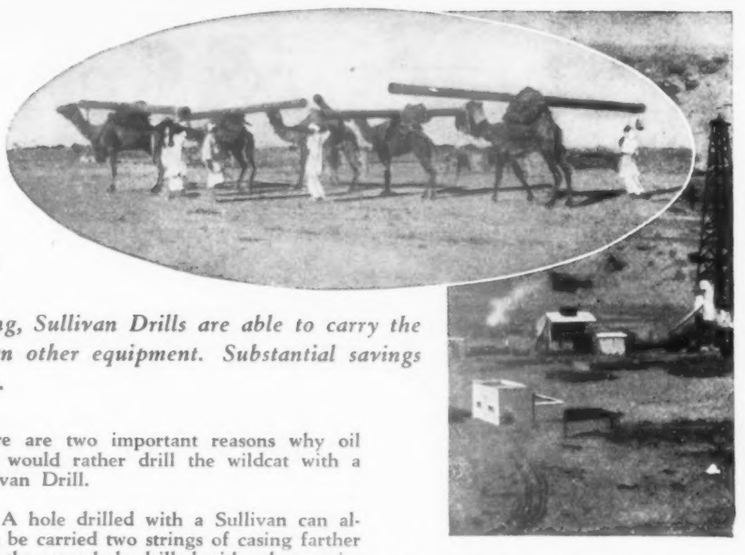
H. P. GOTT MFG. CO. • Winfield, Kansas

KEEP PURE DRINKING WATER ALWAYS HANDY

A Sullivan Drilling Outfit was transported 700 miles into India, to carry on abandoned hole down to 6000 feet.

Sullivan Drills

now making 25-in. holes



starting with 21½-inch casing, Sullivan Drills are able to carry the hole two strings farther than other equipment. Substantial savings now available on deep holes.

Oil men all over the world look with keen interest at the big holes now being drilled with Sullivan Core Drills. Their ability to make 25-inch holes lends new significance to all the economies of core drilling.

One of these holes was started recently in New Zealand. It was spudded in with a 25-in. bit. Twenty-two days later 303 feet of 21½-in. casing was cemented through difficult agglomerates. Two months and nine days later, 16-in. casing was cemented at 1956 feet.

There are two important reasons why oil men would rather drill the wildcat with a Sullivan Drill.

(1) A hole drilled with a Sullivan can always be carried two strings of casing farther than the same hole drilled with other equipment. This is due to the ability of the Diamond Drill to work through smaller casing. (2) If the driller knows in advance, how far he is going to drill, he can start with a smaller hole by using a Sullivan Drill, greatly reducing the cost of the hole.

Core drilling on deep holes, and for structure testing is developing rapidly. If you do not have the latest information send for Booklets 85-H (Deep Tests and Wildcats), 85-K (Structure Testing).

SULLIVAN CORE DRILLS

Sullivan Machinery Company

713 WRIGLEY BLDG.. CHICAGO

Agent for Oklahoma and Kansas, GEO. E. FAILING, Enid, Oklahoma

---

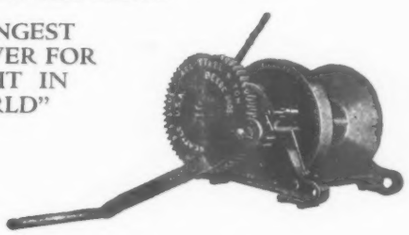
ALL STEEL HAND HOIST

TRADE MARK

SEATTLE, U.S.A.

"THE STRONGEST GEARED POWER FOR ITS WEIGHT IN THE WORLD"

5 TONS Capacity



Weight 110 lbs.

Capacity FIVE TON STRAIGHT LINE

Size 16x17x13" High

Two Speeds 4 to 1 24 to 1

POSITIVE INTERNAL BRAKE

Construction Eight Pieces Electrical Steel Without Keys or Setscrews

A Friend in Need to Every Oilman

The great utility, power and dependability of the Beebe All Steel Hand Hoist is bringing more and more producers to use it for emergency jobs. Does the same heavy hoisting and pulling as much more expensive equipment thus saving time and money. Quick set-up and safe, positive control.

SOLD BY

PRICE $80

Steel Tail Hold Yoke $4 Extra. Truck Attachment Plate, $10 Extra

The National Supply Companies

TYLER

for DEPENDABLE QUALITY . . . PLUS IMMEDIATE SHIPMENT

Regardless of your tube needs—you will find us able to serve you in a dependable and economical manner. Immediate shipment can be made from a warehouse located in your near vicinity.

Boiler Tubes made of

COP-R-LOY
ARMCO INGOT IRON
O. H. STEEL

Today—write us about your standard or special requirements.

THE TYLER TUBE & PIPE CO.
Washington, Pa.

Warehouse Stocks at
The Corbett Corporation
Houston, Texas
Harrisburg Supply Company, Tulsa, Oklahoma
A. M. Castle & Co., Chicago; Seattle, Washington; San Francisco, California; Los Angeles, California
Lukens Steel Company, New Orleans, Louisiana

BOILER TUBES

INDEX TO ADVERTISERS

J. S. Abercrombie Company.....
Acme Fishing Tool Company..... 94
Ajax Iron Works .....
Alco Oil Tool Company .....
Alamo Iron Works 95
Alexander Hotel .....
Allsteel Products Manufacturing Co. .. 99
Alten's Foundry & Machine Works...
Aluminum Company of America.....
American Association of Petroleum Geologists .....
American Cable Company.....
American Hammered Piston Ring Co..
American Iron & Machine Works....
American Meter Company .....
American Roller Bearing Company....
American Steel Works .....
American Steel & Wire Company....
American Telegraph & Telephone Co..
American Tank & Equipment Corp....
The American Well Works..... 94
B. K. Appleman..... 50
Ash Grove Lime & Portland Cement Company .....
Athey Truss Wheel Company..... 96
Audit Bureau of Circulation..... 16
C. L. & W. W. Auer.....
Axelson Manufacturing Company.....

Baash-Ross Tool Company.....
Badgett Steam Lubricator Company... 93
Baldwin-Duckworth Chain Corporation
Baker Oil Tools, Incorporated.....
William S. Barnickel Company.....
The Barrett Company .....
The Bartlett Hayward Company.....
Beaumont Iron Works.....
Beebe Brothers 105
Bessemer Gas Engine Company.....
Bethlehem Steel Company .....
Big Four Foundry Company .....
Black, Sivalls & Bryson .....
Blackor Company 85
Borden Company .....
Bradford Motor Works 95
Brauer Machine & Supply Company..
The Brewster Company....Second Cover
Bridgeport Machine Company .....
T. A. Brown 98
Brust Tool Manufacturing Company...
Buckeye Traction Ditcher Company...
Burns Tool Company .....
Butler Manufacturing Company.....
A. M. Byers Company.....
Byron Jackson Company.....

California Talc Company .....
Cameron Iron Works..... 77
Caterpillar Tractor Company.....
Champion and Barber, Inc. .....
Chain Belt Company 10-11
Chicago Bridge & Iron Works.....
City Ready-Cut House Company.....
Clark Brothers Company .....
Clark Machine Company .....
Climax Engineering Company .....
Columbian Steel Tank Company .....
Continental Supply Company 9
Fred E. Cooper Company.....
The Cooper-Bessemer Corporation..60-61
The Corbett Corporation .....
Corona Silica Company .....
Cyclone Fence Company .....

Darling Valve & Manufacturing Co...
E. M. Dart Manufacturing Company..
Dayton Rubber Manufacturing Co.... 14
Diamond Drill Carbon Company.....
Donovan Boiler Works .....
S. R. Dresser Manufacturing Company
E. I. Dupont de Nemours & Company

Eason-Therolf Tool Company.....
The Edward Valve & Mfg. Company..
E. H. Edwards Company.....
The Economy Pump & Oil Tool Co...
Elliott Core Drilling Company.....
Emsco Derrick & Equipment Company

Fenwick-Reddaway Manufacturing Co.
First National Bank, Houston.....
Fort Worth Laboratories..... 98
Franklin Valveless Engine Company..
Exchange Banks of Tulsa.....
Frick-Reid Supply Corporation..... 73

Garland Wagon Company.....
Gardner-Denver Company .....
Gaso Pump & Burner Manufacturing Company 3
Gates Rubber Company.....
General Electric Company.....
L. H. Gilmer Company..... 8
Globe Oil Tools Company.....
H. P. Gott Manufacturing Company...104
B. F. Goodrich Rubber Company.....
Granger Indicator Company..... 99
Grant Oil Tool Company.....
Gray Tool Company.....
Greene, Tweed & Company..... 94
The Guiberson Corporation..... 18
Gulf Coast Machine & Supply Co....
The Gulf Publishing Company.....
Gulf Refining Company 17
Gulf States Utilities Company.....

Halliburton Oil Well Cementing Co.. 13
Hardway & Cathey..... 98
Hart Brothers Machine Company....
Haynes Stellite Company.....
Harrisburg Pipe & Pipe Bending Co..
Hazard Wire Rope Company.....
C. M. Heeter & Sons Company.....
Hercules Motor Corporation .....
Hercules Supply Company .....
Hercules Tool Company.....
Hewitt Gutta-Percha Rubber Corp....
Heydrick Mapping Company..... 98
Hinderliter Tool Company.....
Geo. O. Hollow Company.....
Hopper Machine Works .....
Hirsch, Brown & Sussman..... 98
The Charles N. Hough Manufacturing Company .....
Houston Engineers .....
Houston National Bank.....
Houston Oil Field Materials Company
Houston Ready-Cut House Company..
Hughes Tool Company.....Fourth Cover
Humble Oil & Refining Company....
Hyatt Roller Bearing Company.....

Ingersoll-Rand Company .....
The International Derrick & Equipment Company .....
International Harvester Company.....
Iverson Tool Company.....

Byron Jackson Company.....
Jarecki Manufacturing Company.....
Jensen Brothers Manufacturing Co.... 96
Johnson Formation Testing Corp.....
Jones & Laughlin Steel Corporation..

Kerotest Manufacturing Company.....
Kirk-Morrow Iron Works Company...

Landis Machine Company.....
Larkin Packer Company.....
The Layne & Bowler Company..... 64
Layne & Bowler, Inc.....
A. Leschen & Sons Rope Company...
Lincoln Electric Company..... 46
Link Belt Company.....
Litterest Commercial Photo Company 98
Lucey Products Corporation.....
Robert E. Lee Hotel.....
Lufkin Foundry & Machine Company

MacClatchie Manufacturing Company.. 62
Maintenance Engineering Corporation.
McCollum Exploration Company..... 98
D. S. Mair Machinery Corporation...
J. H. McEvoy & Company.....
Maloney Tank Manufacturing Co..... 97
Martin-Decker Corporation..... 7
Martin Wagon Company.....
Merchant-Thayer & Company..... 98
Metric Metal Works.....
Mills Alloys, Inc. .....
Mills Iron Works.....
Miller Combination Bailer & Pump Co.
Miller Sand Pump Company.....
Mine Safety Appliance Company.....
Robert J. Miller Company.....
Lee C. Moore & Co. .....Front Cover
The Morris Company.....
I. P. Morris & DeLaVergne, Inc. ....
Murray Tool & Supply Company.....

National Supply Companies..... 20
National Tank Company.....
National Transit Pump & Machine Co. 69
National Tube Company.....
Naylor Pipe Company.....
Norvell-Wilder Supply Company.....

Oakite Products, Incorporated.....
O'Brien Steel Construction Company..
O. C. S. Manufacturing Company....
Oklahoma City Chamber of Commerce
Oklahoma Contracting Company.....
Oil Center Tool Company.....
Oil Well Improvements Co...Third Cover
Oil Well Supply Company.....
Oster Manufacturing Company.....

Page Steel & Wire Company..... 93
Parkersburg Machine Company.....
The Parkersburg Rig & Reel Company
Patterson-Ballagh Corporation.....
Peden Company .....
Pennsylvania Hotel 95
Petroleum Equipment Company..... 98
Petroleum Rectifying Company..... 33
Piccadilly Hotel .....
Pittsburgh Equitable Meter Company..
Pittsburgh Screw & Bolt Corporation
Pittsburgh Steel Products Company..
Portable Rig Company .....
Pratt & Whitney Company.....
Pyrene Manufacturing Company.....

Reading Iron Company .....
Regan Forge & Engineering Company
Reed Roller Bit Company.....
Joseph Reid Gas Engine Company....
Republic Supply Company..... 45
Republic Steel Corporation.....
Resistcor Engineering Corporation....
Rollway Bearing Company .....

Sears Map & Blueprint Company.....
Second National Bank.....100
J. E. Shaffer Company.....
Shaffer Tool Works.....
Sheldon Machinery Corporation.....
Sinclair Refining Company.....
SKF Industries, Inc. .....
A. O. Smith Corporation..... 4-5
E .M. Smith Company.....
Howard Smith Company.....
Smith Separator Company.....
South Chester Tube Company.....
Spang Chalfant & Company.....
Spang & Company.....
Southern Pacific Lines .....
Southern Engine & Pump Company...
Specialty Oil Tool Company.....
Spengler Tool Company .....
Sperry-Sun Well Surveying Company 12
Eugene C. Stacy .....
Standard Day-a-Nite Company.....
Star Drilling Machine Company.....
Jesse R. Stone 98
Sullivan Machinery Company 105
The Superheater Company..... 15

C. J. Tagliabue Manufacturing Co....
Technical Products, Inc. .....
Texas Blue Print & Supply Company
Texas Cyclone Fence Company.....
Texas Electric Steel Casting Company
Texas Iron Works .....
The Thrift Corporation.....
The Timken Roller Bearing Company.. 35
The Titusville Iron Works Company
Tretolite Company .....
Trimont Manufacturing Company....
Trumble Gas Trap Company.....
The Tyler Tube & Pipe Company....105

Union Carbide & Carbon Corporation
Union Wire Rope Company.....
United Air Cleaner Corporation.....

Vez Company .....
Victaulic Company of America .....
Victor Balata & Textile Belting Co...
Vickers Machine Works .....

Westcott Valve Company .....
Westinghouse Electric & Manufacturing Company .....
Wickwire-Spencer Steel Company ....
Wico Electric Company .....
Williamsport Wire Rope Company....
J. H. Williams & Company.....
Wilson Supply Company 49
W-K-M Company .....
Wright Manufacturing Company..... 6
Wyatt Metal & Boiler Works.....
T. T. Word Supply Company.....

Young Engine Corporation .....
Youngstown Sheet & Tube Company..

Every precaution has been taken to insure accuracy in listings in this Index to Advertisers, but last minute changes may result in omissions or erroneous listings for which we ask your indulgence. This index is for the convenience of readers and we do not assume liability for improper listings

WILD WELLS

ARE CAUSED BY FAILURE TO MEET EMERGENCY WITH RAPID ACTION

All Purpose CONTROL HEADS

PROVIDE UNFAILING RAPID ACTION AT ALL TIMES

THE OIL WELL IMPROVEMENTS CO.
Tulsa, Okla.

Operators, contractors, drillers throughout the rotary fields of the world know that for real tool joint economy

Hughes TOOL JOINTS are supreme

HUGHES TOOL COMPANY

Service Plants
Los Angeles
Oklahoma City
Midland, Texas

Main Office and Plant
HOUSTON, TEXAS

Export Offices
Woolworth Bldg.,
New York City